Graduate Studies 800 Preparing Future Faculty offers a colloquium each semester on the academic job search process, a course overview of choosing an academic career, and a program that allows KU doctoral candidates to visit and meet faculty members from area colleges and universities.
Contents and Administration

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Graduate Studies
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Lawrence, KS 66045-7535
rgs@ku.edu, www.rgs.ku.edu, (785) 864-8040

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

Schools with Graduate Degree Programs
Allied Health. Karen L. Miller, Dean
Architecture and Urban Planning. John C. Gaunt, Dean
Business. William Fuerst, Dean
Surendra Singh, Director, Doctoral Program and Research
Charles Krider, Director, Master’s Programs
Education. Rick Ginsberg, Dean
James Lichtenberg, Associate Dean, Graduate Programs and Research
Engineering. Stuart Bell, Dean
Glen Marotz, Associate Dean, Research and Graduate Programs
Fine Arts. Dean
Christopher M. Johnson, Associate Dean

Cover (clockwise from upper left): Seven KU schools offer graduate programs on the Edwards Campus in Overland Park, Kansas. A civil engineering student prepares a concrete beam for a stress test. Chemistry offers diverse research opportunities. A social welfare student works with children at Van Go Arts. Journalism students prepare a newscast in the Stauffer Multimedia Newsroom. Graduates and faculty members assemble at commencement. Allied health, medicine, and nursing programs are offered at KU Medical Center in Kansas City, Kansas. Spencer Museum of Art offers a collection of nearly 36,000 artworks and artifacts. KU’s main campus is in Lawrence, Kansas. The University Symphony Orchestra performs at the Lied Center of Kansas. In 2006, KU’s School of Pharmacy ranked third in the nation for securing funding from the National Institutes of Health.
Distinguished and University Teaching Professors

Schools and departments also appoint teaching professors, some for limited terms. See the Graduate Faculty chapter at the end of this catalog for a more complete list. (March 2008.) Visit www.distinguishedprofessors.ku.edu.

Lawrence Campus

Craig Adams, J.L. Constant Distinguished Professor of Civil, Environmental, and Architectural Engineering
Helen Alexander, Chancellors Club Teaching Professor of Ecology and Evolutionary Biology
Robert Antonio, Chancellors Club Teaching Professor of Sociology
Victor Bailey, Charles W. Battey Distinguished Professor of Modern British History
William A. Barnett, Charles W. Oswald Distinguished Professor of Economics
Rakesh K. Bhala, Raymond F. Rice Distinguished Professor of Law
George Bittingmayer, Wagnon Distinguished Professor of Business and Harold Otto Distinguished Professor of Economics
Ronald T. Borchardt, Summerfield Distinguished Professor of Pharmaceutical Chemistry
Kristin Bowman-James, University Distinguished Professor of Chemistry
Daryle H. Busch, Roy A. Roberts Distinguished Professor of Chemistry
Raghunath V. Chaudhari, Deane E. Ackers Distinguished Professor of Chemical and Petroleum Engineering
Shih-I Chu, Watkins Distinguished Professor of Chemistry
Allan J. Cigler, Chancellors Club Teaching Professor of Political Science
Jonathan C.D. Clark, Hall Family Foundation Distinguished Professor of History
George C. Coggins, Frank E. Tyler Distinguished Professor of Law
Bernard Cornet, Charles W. Oswald Distinguished Professor of Microeconomics
Jose Sequeira Costa, Cordelia B. Murphy Distinguished Professor of Piano

David Darwin, Deane E. Ackers Distinguished Professor of Civil, Environmental, and Architectural Engineering
Lynn Davidman, Beren Distinguished Professor of Modern Jewish Studies
Richard T. De George, University Distinguished Professor of Philosophy
Amy Devitt, Chancellors Club Teaching Professor of English
Martin B. Dickinson Jr., Robert A. Schroeder Distinguished Professor of Law
Christopher R. Drahozal, John M. Rounds Distinguished Professor of Law
Charles C. Eldredge, Hall Family Foundation Distinguished Professor of History of Art
Steven A. Epstein, Ahmanson-Murphy Distinguished Professor of Medieval History
Joseph B. Evans, Deane E. Ackers Distinguished Professor of Electrical Engineering and Computer Science
Stephen B. Fawcett, Kansas Health Foundation Distinguished Professor of Applied Behavioral Science
H. George Frederickson, Edwin O. Stene Distinguished Professor of Government
Victor S. Frost, Dan F. Servey Distinguished Professor of Electrical Engineering and Computer Science
Robert L. Glicksman, Robert W. Wagstaff Distinguished Professor of Law
Prasad Gogineni, Deane E. Ackers Distinguished Professor of Electrical Engineering and Computer Science
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Susan K. Harris, Joyce and Elizabeth Hall Distinguished Professor of American Literature and Culture
Michael H. Hoeflich, John H. and John M. Kane Distinguished Professor of Law
David S. Holmes, Chancellors Club Teaching Professor of Psychology
Craig L. Huneke, Henry J. Bischoff Distinguished Professor of Mathematics
Susan J. Kemper, Roy A. Roberts Distinguished Professor of Psychology
Barbara Kerr, Williamson Family Distinguished Professor of Counseling Psychology
Dennis D. Lane, N.T. Veatch Distinguished Professor of Civil, Environmental, and Architectural Engineering
Wojciech Lesnikowski, Don Hatch Distinguished Professor of Architecture
Richard E. Levy, J.B. Smith Distinguished Professor of Constitutional Law
Alice Lieberman, Chancellors Club Teaching Professor of Social Welfare

Photography by University Relations staff: R. Steve Dick, Doug Koch, and David McKinney.


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

Distinguished & Teaching Professors

Paul Stephen Lim, Chancellors Club Teaching Professor of English
Susan M. Lunte, Ralph N. Adams Distinguished Professor of Chemistry and Pharmaceutical Chemistry
Craig E. Martin, Chancellors Club Teaching Professor of Ecology and Evolutionary Biology
Keith G. Meyer, E.S. and Tom W. Hampton Distinguished Professor of Law
Elias Michaelis, University Distinguished Professor of Pharmacology and Toxicology
C. Russell Middaugh, Takeru Higuchi Distinguished Professor of Pharmaceutical Chemistry
Lester A. Mitscher, University Distinguished Professor of Medicinal Chemistry
Joane P. Nagel, University Distinguished Professor of Sociology
Berl H. Oakley, Irving Johnson Distinguished Professor of Molecular Biosciences
Allan H. Pasco, Hall Family Foundation Distinguished Professor of French and Italian
A. Townsend Peterson, University Distinguished Professor of Ecology and Evolutionary Biology
Blake Peterson, Regents Distinguished Professor of Medicinal Chemistry
Mabel L. Rice, Fred and Virginia Merrill Distinguished Professor of Advanced Studies, Speech-Language-Hearing
Stanley T. Rolfe, Albert P. Learned Distinguished Professor of Civil, Environmental, and Architectural Engineering
Elinor P. Schroder, Paul E. Wilson Distinguished Professor of Law
Paul Selden, Gulf-Hedberg Distinguished Professor of Geology
K. Sam Shamugan, Southwestern Bell Distinguished Professor of Electrical Engineering and Computer Science
Prakash P. Shenoy, Ronald G. Harper Distinguished Professor of Business
Paulette Spencer, Deane E. Ackers Distinguished Professor of Geology
Don W. Steeples, Dean A. McGee Distinguished Professor of Chemical Engineering
Joseph Steinmetz, University Distinguished Professor of Molecular Biosciences
Valentino Stella, University Distinguished Professor of Pharmaceutical Chemistry
Bala Subramaniam, Dan F. Servey Distinguished Professor of Chemical and Petroleum Engineering
Karan S. Surana, Deane E. Ackers Distinguished Professor of Mechanical Engineering
Thomas N. Taylor, Roy A. Roberts Distinguished Professor of Ecology and Evolutionary Biology
Barbara N. Timmermann, University Distinguished Professor of Medicinal Chemistry
Ann P. Turnbull, Ross and Marriana Beach Distinguished Professor of Special Education
H. Rutherford Turnbull III, Ross and Marriana Beach Distinguished Professor of Special Education
G. Paul Willhite, Ross H. Forney Distinguished Professor of Chemical and Petroleum Engineering
George S. Wilson, Takeru Higuchi Distinguished Professor of Chemistry and Pharmaceutical Chemistry
Donald E. Worster, Hall Family Foundation Distinguished Professor of History
Judy Wu, University Distinguished Professor of Physics and Astronomy

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

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Graduate Calendar

**Fall Semester 2007**
See [www.registrar.ku.edu](http://www.registrar.ku.edu) for enrollment dates.

**August 16**
Classes begin.

**August 30**
If a student was enrolled during summer session 2007 and meets all requirements for December 2007 graduation by this date, the student is not required to enroll for fall semester 2007.

**September 3**
Labor Day. No classes.

*Check with individual Graduate Divisions* for the last day for May 2008 doctoral aspirants to take comprehensive oral examinations.

**October 11**
Fall break begins.

**October 15**
Classes resume.

**November 21**
Recess begins.

**November 26**
Classes resume.

*Check with individual Graduate Divisions* for the last day for December 2007 master’s and doctoral candidates to take final examinations.

**December 6**
Last day of classes.

**December 10-14**
Final examinations.

**December 14**
Last day for December 2007 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 2008 commencement).

**Spring Semester 2008**
See [www.registrar.ku.edu](http://www.registrar.ku.edu) for enrollment dates.

**January 17**
Classes begin.

**January 31**
If a student was enrolled during fall semester 2007 and meets all requirements for May 2008 graduation by this date, the student is not required to enroll for spring semester 2008.

*Check with individual Graduate Divisions* for the last day for August 2008 doctoral aspirants to take comprehensive oral examinations.

**February 1**
Last day to file applications for fellowships.

**March 17**
Spring recess begins.

**March 24**
Classes resume.

*Check with individual Graduate Divisions* for the last day for May 2008 master’s and doctoral candidates to take final examinations.

**April 30**
Last day for May 2008 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 8**
Last day of classes.
**May 12-16**
Final examinations.

**May 17**
Doctoral hooding ceremony (tentative date).

**May 18**
Commencement (projected date).

**Summer Session 2008**
See www.registrar.ku.edu for enrollment dates.

**June 3**
Classes begin.

**June 10**
If a student was enrolled during spring semester 2008 and meets all requirements for August 2008 graduation by this date, the student is not required to enroll for summer session 2008.

*Check with individual Graduate Divisions* for the last date for December 2008 doctoral aspirants to take comprehensive oral examinations.

*Check with individual Graduate Divisions* for the last date for August 2008 master’s and doctoral candidates to take final examinations.

**July 25**
Last day for August 2008 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 25**
Last day of classes.

**August 1**
August degrees awarded (formally conferred at May 2009 commencement).

**Fall Semester 2008**
See www.registrar.ku.edu for enrollment dates.

**August 21**
Classes begin.

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

**September 4**
If a student was enrolled during summer session 2008 and meets all requirements for December 2008 graduation by this date, the student is not required to enroll for fall semester 2008.

*Check with individual Graduate Divisions* for the last date for May 2009 doctoral aspirants to take comprehensive oral examinations.

**October 16**
Fall break begins.

**October 20**
Classes resume.

**November 26**
Recess begins.

**December 1**
Classes resume.

*Check with individual Graduate Divisions* for the last date for December 2008 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 2008 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 2009 commencement).

**Spring Semester 2009**
See www.registrar.ku.edu for enrollment dates.

**January 15**
Classes begin.

**January 29**
If a student was enrolled during fall semester 2008 and meets all requirements for May 2009 graduation by this date, the student is not required to enroll for spring semester 2009.

*Check with individual Graduate Divisions* for the last date for August 2009 doctoral aspirants to take comprehensive oral examinations.

**February 2**
Last day to file applications for fellowships.

**March 16**
Spring recess begins.

**March 23**
Classes resume.

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

**April 29**
Last day for May 2009 master’s and doctoral candidates to file theses, dissertations, and other materials in their Graduate Division offices. No extensions will be granted by Graduate Divisions.

**May 7**
Last day of classes.

**May 11-15**
Final examinations.

**May 16** (tentative date)
Doctoral hooding ceremony.

**May 17** (projected date)
Commencement.

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

The University of Kansas is accredited by the North Central Association of Colleges and Schools, 30 North LaSalle St., Suite 2400, Chicago, IL 60602, (800) 621-7440.
Summer Session 2009
See www.registrar.ku.edu for enrollment dates.

**June 9**
Classes begin.

**June 16**
If a student was enrolled during spring semester 2009 and meets all requirements for August 2009 graduation by this date, the student is not required to enroll for summer session 2009.

*Check with individual Graduate Divisions* for the last date for December 2009 doctoral aspirants to take comprehensive oral examinations.

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

**July 31**
Last day for August 2009 master’s and doctoral candidates to file theses, dissertations, and other materials in their Graduate Division offices. No extensions will be granted by Graduate Divisions.

** **July 31**
Last day of classes.

**August 1**
August degrees awarded (formally conferred at May 2010 commencement).

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

**Dates are subject to change. See the online Schedule of Classes, www.registrar.ku.edu, for specific dates.

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

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

The Mission of the University of Kansas
The complete Statement of Institutional Mission, as approved by the Kansas Board of Regents, appears in *University of Kansas Profiles*, available online at www2.ku.edu/~oirp/profiles.shtml, or at the reference desk in Watson Library on the Lawrence campus. It is also available from the University of Kansas, Office of Institutional Research and Planning, Carruth O’Leary Hall, 1246 West Campus Rd., Room 339, Lawrence, KS 66045-7505, (785) 864-4412; and the University of Kansas, 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, KU Medical Center, 2nd floor, Murphy Administration Bldg., Mail Stop 2015, 3901 Rainbow Blvd., Kansas City, KS 66160, (913) 588-1400.

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

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

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

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


KU has 43 nationally ranked programs — 24 in the top 25 and 12 in the top 10 among public universities — according to U.S. News & World Report’s “America’s Best Graduate Schools” rankings for 2007.
General Information
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 awarded its first doctoral degree, a Ph.D. in mathematics. In the Kansas Board of Regents system, the university accounts for about 70 percent of 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 University Communities**

The University of Kansas 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.

**Lawrence**

KU’s main campus is in Lawrence, Kansas, a youthful, thriving community with a population of 82,000. The campus is in the heart of the city on a ridge called Mount Oread. The tree-lined main street a few blocks from campus has an abundance of small specialty shops. Other shopping centers are nearby. The community has 32 public parks, three community swimming pools, an arts center, a public library, a community center, and active community education and recreation programs. The Lawrence Community Theatre, Lawrence Chamber Orchestra, and Seem-to-Be Players children’s theatre group present music and theatre events. The Lawrence Arts Center offers classes in arts, crafts, music, dance, and other subjects for children and adults, as well as gallery shows. Local galleries sponsor art exhibits.

The 1,000-acre Lawrence campus has 100 major buildings. See the Campus Buildings Directory, [www.buildings.ku.edu](http://www.buildings.ku.edu), for a complete list of academic, research, athletic, and residence facilities.

The $40 million Multidisciplinary Research Building was dedicated in 2006. The 106,000-square-foot building houses more than 200 scientists, students, researchers, and support staff from chemistry, geology, pharmaceutical chemistry, and other disciplines.

The $2.7-million, 7,000-square-foot Sabatini Multicultural Resource Center opened in 2008. The center features updated technology, programming space, and academic resources.

Hall Center for the Humanities has about 14,700 square feet of space and includes a 120-seat conference room, a seminar room, and offices for staff and research fellows. The center, which opened in 2005, celebrates the humanities and incorporates elements of KU’s oldest surviving structure, the 1887 Powerhouse.

**Kansas City and KU Medical Center**

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

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

**KU Edwards Campus, Overland Park**

KU offers a variety of graduate and undergraduate programs on the KU Edwards Campus in Overland Park, Kansas. The campus caters to the full-time employee by offering late afternoon and evening classes. KU faculty members teach the courses, and students earn the same course credit as for classes offered in Lawrence. The campus has recently expanded, adding a new classroom building that more than doubles the space and a student union featuring an expanded KU Bookstore, coffee shop, WiFi environment, and outdoor seating terrace. The Student Success Center provides on-site services from the Academic Achievement and Access Center/Disability Resources, Writing Center, and University Career Center. A degree from the Edwards Campus is a degree from KU. For more information, call the Edwards Campus at 864-8400 from Lawrence or (913) 897-8400 from other locations. Visit the Edwards Campus online at [http://edwardscampus.ku.edu](http://edwardscampus.ku.edu).

**University Support**

The University of Kansas is the largest Regents institution in Kansas. About 24 percent of the Lawrence campus budget and more than a third of the Medical Center budget come from state appropriations. The sources of the rest of the budget are gifts, grants, and fees. KU’s total research expenditures in fiscal year 2005 for all projects, including sponsored research, training, and service grants in all fields, were $281 million, a 3 percent increase over 2004.

At the close of the 2006 fiscal year, the Kansas University Endowment Association market value of total assets reached $1.4 billion. Among public universities, KU Endowment ranks 20th in size of endowment per student; 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, 110 of the 150 buildings on KU’s campuses, including the Hoglund Brain Imaging Center at the KU Medical Center, Regnier Hall on the Edwards Campus, and in Lawrence, the Dole Institute of Politics, Rieger Scholarship Hall, and the Lied Center of Kansas.

Throughout its 115-year history, KU Endowment has given $1.3 billion in private support to KU through the generosity of its donors. In 2006, more than 8,000 KU students received $23.5 million in
scholarships, awards, prizes, and loans. In 2006, KU Endowment’s support of the university amounted to $99 million for, among other things, construction, faculty and student support, academic programs, library acquisitions, and equipment.

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’ workforce needs.

Many service functions are offered through the libraries, museums, and research agencies described in the chapter 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.

International Awareness
The University of Kansas believes that the increasing interdependence of the world highlights the importance of an internationally diverse student body. International students enrich the intellectual and cultural life of the university. Interactions between students from abroad and U.S. students and faculty members are valuable opportunities for all involved to grow in cross-cultural understanding and develop greater awareness of the world’s cultures, ideas, and nationalities.

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

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

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

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

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

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

Inquiries regarding the affirmative action program, equal opportunity policy, nondiscrimination policy, and reports or allegations of discrimination or harassment on the Lawrence campus should be made to Linda Fund, assistant director, Department of Human Resources and Equal Opportunity, Carruth-O’Leary Hall, 1246 West Campus Rd., Room 103, Lawrence, KS 66045-7505, (785) 864-3686, www.lbro.ku.edu. On the KU Medical Center campus, contact Jayne Owen, director, Equal Opportunity Office, KU Medical Center, 1040 Wescoe, Mail Stop 2014, 3901 Rainbow Blvd., Kansas City, KS 66160, (913) 588-1206, (913) 588-7963 (TDD), www.kumc.edu/eoo.

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

To view the Graduate Catalog online, see www.catalogs.ku.edu/graduate.
Request copies of the Graduate Catalog online at www.rgs.ku.edu.

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

Persons whose records indicate their ability to succeed with advanced work may be admitted to graduate studies 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 regionally accredited institution or foreign university with substantially equivalent bachelor’s degree requirements. Graduate degree programs have the discretion of accepting a degree earned through distance education based on the applicant’s overall qualifications and recommendations. 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 dean 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 and Graduate Division to work for an advanced degree without excessive deficiencies in prerequisites.

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 is not permitted to re-enroll in graduate studies 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 graduate studies 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 KUMC Graduate Studies 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 changes the student’s status. (4) At the end of the first academic year, which begins with the first semester of enrollment, the student retains graduate status if a department has completed a Do-all form or submitted a petition to the dean of Graduate Studies, KUMC. The dean may extend the Special-B status for one semester or an appropriate period of time.

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 accepted by a department or program, only work taken as a nondegree A student that 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 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, 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

Apply for admission through the Graduate Application Processing Center. Because some departments have a limited number of student positions, applications should be submitted as early as possible. To ensure adequate time for review, the appli-

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

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

For information about KU’s Applied English Center, see the KU Undergraduate Catalog.
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 non-native speakers of English and/or international students to graduate studies. These guidelines also apply to U.S. citizens and permanent residents who are not native speakers of English; they are subject to change by official action of the appropriate governance bodies.

1. Verification that the applicant is a native speaker of English from the United Kingdom, Ireland, Australia, New Zealand, an English-speaking province of Canada, or an English-speaking Caribbean country.

2. Graduation with a baccalaureate degree or higher earned in residence 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. This does not apply to degrees earned online.

3. Graduation with a baccalaureate degree or higher from a program taught in English at an international institution. Verification of English instruction from the university is required as part of the application and must be included in the application package. Verification can be from a catalog or program description brochure or an official letter from a department chair, dean, or other university official stipulating English as the language of instruction. The program considering admission should also conduct a phone interview with the prospective student. Individual programs can opt for a more restrictive policy.

4. Receipt of an official copy (not student’s copy) of the applicant’s Test of English as a Foreign Language (TOEFL) scores or International English Language Testing System (IELTS) scores (academic format) achieved no more than two years before the semester of admission.

Regular Admission*

- Internet-based TOEFL—All part scores at least 20.
- Computer-based TOEFL—All part scores at least 20.
- Paper-based TOEFL—All part scores at least 53.
- IELTS—Minimum band score 6.0 with no score below 5.5.

Provisional Admission*

- Internet-based TOEFL—All part scores 18-19.
- Computer-based TOEFL—All part scores 18-19.
- Paper-based TOEFL—All part scores 51-52.
- IELTS—Minimum band score 5.5 with no score below 5.

*English requirements for an exemption from the Applied English Center Proficiency Test are higher than the English requirements for admission. Admitted students take the English Proficiency Test and may be required to enroll in one or more Applied English Center courses if they have:

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

For applicants with one or more parts of the Internet-based TOEFL below 18, one or more parts of the paper-based TOEFL below 18, one or more parts of the paper-based TOEFL below 51, an IELTS band score below 5.5, or any IELTS score below 5, 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 graduate study as determined by the Applied English Center.

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

Exception: The applicant may be provisionally admitted to graduate studies 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 identifies such courses 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 graduate study as determined by the Applied English Center.

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 Divisions.

All sponsored international students who have been admitted by graduate degree programs may be admitted provisionally to graduate studies 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 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 requirements, the status of the sponsored international graduate student may be changed from provisional to regular.

Exceptions to the minimum English proficiency requirements are considered on a case-by-case basis.

All students whose first language is not English must be cleared by the Applied English Center before enrolling. Consult the Applied English Center for current requirements.

Degrees

Degrees are awarded three times each year, in August, December, and May. Each academic year’s degrees are conferred formally at the annual commencement in May. Degree candidates are not eligible to graduate if the graduate grade-point average is lower than 3.0 on all courses acceptable for graduate credit. A doctoral hooting ceremony is held each May at commencement for those eligible for the degrees of Doctor of Philosophy, Doctor of Audiology, Doctor of Education, Doctor of Engineering, Doctor of Musical Arts, Doctor of Occupational Therapy, and Doctor of Physical Therapy. Only doctoral candidates who have fulfilled all of their degree requirements by the deadline date for graduation in May are allowed to participate in the May doctoral hooting 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

Traditional Master of Arts and Master of Science degrees are granted, as well as 15 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 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.

Professional Master’s Degrees. A number of professional master’s degrees are granted, of which all but one are offered through the professional schools. These degrees are Master of Science in Education, Master of Accounting, 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 Music, Master of Music Education, Master of Occupational Therapy, Master of Public Administration, Master of Public Health, Master of Urban Planning, and Master of Social Work. 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 Public Administration 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.

Combined Degrees. Several combined degrees are granted in programs meeting the requirements of the graduate master’s or doctoral degree and the professional post-baccalaureate degree. Approved programs include those for the degrees of M.A. or M.S. in basic medical science fields with the M.D.; M.A. with a major in American studies with M.U.P.; M.A. with a major in geography with M.U.P.; M.A. with a major in East Asian languages and cultures, economics, indigenous nations studies, or philosophy with J.D.; M.B.A., M.H.S.A., M.P.A., M.S. in journalism, or M.U.P. with J.D.; M.B.A. with Master’s in Management from ESC Clermont, France; M.B.A. with M.A. in area studies (East Asian languages and cultures; Latin American studies; or Russian, East European, and Eurasian studies); M.B.A. with Pharm.D.; M.H.S.A. with B.S. in health information management; M.P.A. with M.U.P.; M.S. in nursing with M.H.S.A. or M.P.H.; M.D. with M.P.H.; M.D. with M.H.S.A.; and Ph.D. in applied behavioral science with M.P.H.

Master’s Degree Programs

Master’s degrees are listed below.

School of Allied Health

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

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

School of Business

Master of Accounting
Master of Business Administration
Master of Science
  Business

School of Education

Master of Arts
  Education
  Master of Science
  Counseling Psychology
  Master of Science in Education

School of Engineering

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

**School of Fine Arts**  
Master of Arts  
Visual Art Education  
Master of Fine Arts  
Art  
Design  
Scenography  
Master of Music  
Master of Music Education  
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  
Applied Behavioral Science  
Audiology  
Biochemistry and Biophysics  
Botany  
Chemistry  
Child Language  
Classics  
Clinical Child Psychology  
Communication Studies  
East Asian Languages and Cultures  
Ecology and Evolutionary Biology  
Economics  
English  
Entomology  
French  
Geography  
Germanic Languages and Literatures  
Gerontology  
History  
History of Art  
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 Fine Arts  
Creative Writing  
Master of Public Administration  
Master of Science  
Chemistry  
Geology  
Physics  

**School of Medicine**  
Master of Arts  
Cell Biology and Anatomy  
Microbiology  
Pathology  
Pharmacology  
Master of Health Services Administration  
Master of Public Health  
Master of Science  
Biochemistry and Molecular Biology  
Clinical Research  
Molecular and Integrative Physiology  
Pharmacology  
Toxicology  

**School of Nursing**  
Master of Science  
Nursing  

**School of Pharmacy**  
Master of Science  
Hospital Pharmacy  
Medicinal Chemistry  
Pharmaceutical Chemistry  
Pharmacology and Toxicology  

**School of Social Welfare**  
Master of Social Work  

The college and the schools listed above may offer either or both of the degrees Master of Arts and Master of Science with a major in special studies.

**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 offers seven graduate doctoral degrees: Doctor of Philosophy (Ph.D.), Doctor of Audiology (Au.D.), Doctor of Education (Ed.D.), Doctor of Engineering (D.E.), Doctor of Musical Arts (D.M.A.), Doctor of Occupational Therapy (O.T.D.), and Doctor of Physical Therapy (D.P.T.). 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.

General descriptions for each of the doctoral degrees are given here in succinct form to provide convenient comparison of the degrees. Detailed information about 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 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 respect for human values, integrating various human

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

Two KU graduate programs — special education and city management and urban policy — rank first in the nation, according to U.S. News & World Report’s “America’s Best Graduate Schools” rankings for 2007.
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 extra-departmental 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, KU offers interdisciplinary special studies doctoral programs. To be eligible for 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 Audiology.** The Doctor of Audiology (Au.D.) program prepares students to meet the academic and clinical requirements for the Certificate of Clinical Competence awarded by the American Speech-Language-Hearing Association; it is designed to be completed in four years. Courses include basic science, clinical science, and clinical procedures. Consistent with ASHA certification standards, degree requirements also include the completion of a minimum of 2,000 hours of supervised clinical practicum. Au.D. students also must complete a research project and present the findings at a faculty-student forum. Degree requirements are listed in the School of Allied Health chapter of this catalog.

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

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

**Doctor of Musical Arts.** The degree of Doctor of Musical Arts (D.M.A.) is intended as 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); clarinet; composition; conducting (band, choral, or orchestral); flute; French horn; oboe; organ; percussion; piano performance, literature, and pedagogy; saxophone; strings; trombone; trumpet; tuba; and voice.

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

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

**Doctoral Degree Programs**

Doctoral degrees are listed below.

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

**School of Architecture and Urban Planning**
- Doctor of Philosophy
  - Architecture

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

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

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

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

**College of Liberal Arts and Sciences**
- Doctor of Philosophy
  - American Studies
  - Anthropology
  - Audiology
  - Behavioral Psychology
  - Biochemistry and Biophysics
  - Botany
  - Chemistry
  - Child Language
  - Clinical Child Psychology
  - Communication Studies
  - Ecology and Evolutionary Biology
  - Economics
  - English
  - Entomology
  - French
  - Geography
  - Geology
  - Germanic Languages and Literatures
Most health sciences programs of the University of Kansas are offered at the KU Medical Center in Kansas City.

KU is one of only 19 public colleges and universities to make the Best Buys of 2007 list in the Fiske Guide to Colleges. In the Fiske Guide, which rates “the best and most interesting” U.S. colleges and universities, KU scores four out of five stars in academics, quality of life, and social life.
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 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. Students earning a master’s thesis degree must have completed at least one hour of thesis enrollment before the master’s degree may be awarded. See www.graduate.ku.edu/~etd for information and requirements for submitting the thesis electronically.

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

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

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

Combined Medical and Master’s Degrees
Graduate students in the basic medical science departments in the School of Medicine are enrolled, for the most part, only in graduate programs. Outstanding medical students, however, are allowed to participate in work leading jointly to the M.D. degree and a graduate degree. A student admitted to both schools may enroll concurrently in courses in the respective schools, provided the regular medical course load is reduced to compensate for the added graduate work. The student should discuss concurrent enrollment with the chair or graduate advisor of the basic science department; departmental policies vary. All requirements for the degrees must be met, but within these limitations, superior students may be able to complete the joint degree program in less 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.

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

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

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

2. Program Time Constraints. Minimum Tenure: The student must spend three full academic years, or the bona fide equivalent thereof, in resident study at this or some other approved university, including the time spent in attaining the master’s degree. Resident study at less than full time requires a correspondingly longer period, but the requirement is not measured merely in hours of enrollment. Because a minimum number of hours for the degree is not prescribed, no transfer of credit is appropriate. However, graduate degree programs take relevant prior 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 residence requirements. Please check with the Graduate Division of your school or college for any additional requirements.

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

A student in any of the above categories may petition the Graduate Division through the department for a leave of absence during either the pre- or post-comprehensive period to pursue full-time professional activities related to the doctoral program and long-range professional goals. Leaves of absence 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, however, a doctoral aspirant or candidate loses status as such and must apply for readmission to the program and the Graduate Division.

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

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

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

Foreign Language: An aspirant who wishes to demonstrate a reading knowledge of a foreign language ordinarily may do so in one of two ways: (1) pass a language examination devised and administered by the student’s own department in consultation with the appropriate KU language department or (2) com-

It is each graduate student’s responsibility to know and observe all regulations and procedures relating to the graduate degree program the student is pursuing. See Student Responsibilities on page 27.

The Princeton Review’s “America’s Best Value Colleges” has named the University of Kansas one of the country’s best education values. KU was selected for its outstanding academics, low to moderate tuition and fees, and generous financial aid packages.
Doctoral Degree Requirements

Complete DANE 101, DTCH 101, FREN 100, GERM 101, ITAL 100, RUSS 101, or SPAN 100 with a grade of C or higher, or LAT 101 with a grade of B or higher. If some other language is proposed, arrangements should be made through the major or departmental adviser with the appropriate language department or competent testing authority. Some graduate degree programs accept as evidence of language competence the certification of a graduate student by a qualified KU professor in a given language at the fourth level of competence in reading, comprehension, and speaking or accept 16 hours in a single language taken at this or another university as a graduate or undergraduate student. Requirements for demonstrating competence in reading, writing, and speaking one foreign language are set by the language departments. The student should ask these departments for further information and advice. In all cases, the Graduate Division must be notified which method each student has used to satisfy this requirement.

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

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

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

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

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

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

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

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

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

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

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

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

Both the dissertation research and the dissertation itself are to be completed under the guidance and direction of the committee appointed as described above. Instructions about the proper form of the dissertation may be obtained from the KU graduate Web site 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, climax 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 the electronic submission of the approved dissertation. A title page and acceptance page with original signatures, along with the electronic submission fee (and copyright fee if applicable) should be submitted to the appropriate Graduate Division as well.

When the completed dissertation has been accepted by the committee in final draft form, and all other degree requirements have been satisfied, the chair of the committee requests the Graduate Division to schedule the final oral examination. This request must be made in advance of the desired examination by at least the period specified by the Graduate Division (normally at least three weeks). The submission of the request must allow sufficient time to publicize the examination so that interested members of the university community may attend. At least five months must elapse between the successful completion of the comprehensive oral examination and the date of the final oral examination.

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

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

8. Dissertation Submission and Publication. When the final oral examination has been passed and the dissertation has been signed by the members of the dissertation committee, a title page and acceptance page with original signatures, along with appropriate fees, 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, through the electronic submission process found at www.graduate.ku.edu/~etd.

The student must be the author of the dissertation, and every publication from it naturally must indicate that authorship. However, practices vary among disciplines, and even among scholars in a given field, as to whether the mentor’s name may appear as a co-author and whether as senior or junior, on the published dissertation, usually revised, or on articles prepared from it. Clear understandings in individual cases are expected to derive from the apprenticeship period, when the 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 comparable to those of the student and request that he or she act as adviser. Normally this professor is a faculty member of the program of principal interest to the student. It is essential that this program be one that grants doctorates and that the selected professor be authorized to chair doctoral dissertation committees.
4. After a professor agrees to serve as adviser, the student should assemble an advisory committee of at least three additional professors representing the disciplines covered in the special program. At least two disciplines or departments must be represented.
5. In conjunction with the adviser and the committee, the student prepares a proposal for study, including
   (a) A statement, with supporting documentation, that the proposed special studies Ph.D. cannot be accomplished through established programs.
   (b) A definition of the field of study incorporating in a consistent way a description of the contribution of each included discipline to the broader field.
   (c) An outline of the course of study, indicating substantive work in the fields represented. Readings courses and independent study do not substitute for regular courses.
   (d) A description of the method for satisfying research skills requirements.
   (e) A description of the comprehensive examination procedures (nature of the examinations and possible examining 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 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, (iii) letters of recommendation and other appropriate supporting documents.

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

**Admission and Review Procedure.** Upon completion of the above, the student must present the application for admission to the special studies program. At that time, a review committee is appointed, consisting of (a) dean(s) or director(s) of graduate studies or their designates for the school(s) involved in the interdisciplinary undertaking and (b) two or more doctoral chairing faculty members from unrelated fields who are members of the Graduate Council, at least one of whom must represent a discipline not involved in the special studies program under consideration. The committee reviews the documents and may, if necessary, interview the student and the adviser for clarification and additional information or to discuss suggested revisions to the proposal.

**Approved Program Implementation.** Upon acceptance of the proposal and admission to the special program, the student is admitted to the school of the major adviser to facilitate record keeping and to provide a central administrative office. The director of graduate studies of that school must enroll the student and monitor the program and, along with the major adviser, must make periodic reports to Graduate Studies on the student’s progress. These reports are distributed to the directors of other involved programs along with a request to supply any additional information regarding the student’s performance. Proposals for major deviations from the approved course of study must be submitted for review by Graduate Studies and by the graduate studies office(s) of the involved school(s). It is understood that no additional requirements unique to traditional graduate programs of the involved school(s) or departments may be imposed unless stated explicitly in the approved study plan.

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

**Combined Medical and Doctoral Degrees**

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

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

**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. 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, (785) 864-8400 or (913) 897-8400. Residence credit courses (education and applied behavioral science) are offered in the Leavenworth public school system, although it is not fully recognized as a center.

The Schiefelbusch Institute for Life Span Studies coordinates KU extramural programs at the Kansas Mental Retardation and Developmental Disabilities Research Center at Parsons State Hospital and Training Center in Parsons, Kansas. These programs are offered by the School of Education, the Department of Applied Behavioral Science, and the Intercampus Program in Communicative Disorders.

**Admission.** All students who enroll in off-campus graduate study and expect to receive graduate credit must gain admission to KU 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 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 required for the degree.

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

**Independent Study/Distance Learning**

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

**Interinstitutional Programs and Studies**

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

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

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

**International Programs**

Lawrence. International Programs, www.international.ku.edu, coordinates international activities on the Lawrence campus, working with area studies centers, professional schools, and other units to provide enriched international opportunities for faculty and students. It helps faculty seek external funding for international projects and administers grants and fellowships for graduate students and faculty. It develops programs for international visitors and outreach initiatives aimed at increasing global awareness and cross-cultural expertise among members of the university, the business community, and the general public. The office actively cooperates with state agencies, community organizations, schools, the private sector, and other groups in the community and region that have international interests. The following units report to 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.

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

- University of Costa Rica (Costa Rica)
- Université de Franche-Comté, Besançon (France)
- Gornyi Institute, St. Petersburg University (Russia)
- University of Santiago de Compostela (Spain)
- Ivan Franko University, 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, www.international.ku.edu.
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.

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

General 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 and is taught by a person holding a current appointment to the Graduate Faculty.

Undergraduates who enroll in graduate-level courses (numbered 700 through 999) pay tuition at the graduate rate. Graduate students who enroll in undergraduate-level courses (numbered 000 through 499) pay tuition at the undergraduate rate.

Credit by Examination
Credit by examination is not accepted toward graduate degrees.

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. Courses that have been graded B– do not transfer. 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 the requirements for a graduate degree, completed either at KU or at another institution, may not be used toward the requirements for an additional advanced degree at KU.

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. (See 5. Candidacy under Doctoral Degree Requirements, Doctor of Philosophy, in this chapter of the catalog.) 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 residence requirements, even if the minimal enrollments of the INS are lower.

Note: Students should check with their graduate degree programs to determine if the program has additional enrollment requirements.

Online Enrollment. The Office of the University Registrar offers enrollment online. KU Enroll & Pay offers enrollment assistance in Lawrence, at KU Medical Center, and on the KU Edwards Campus in person, by telephone, and online. For current information and procedures, see www.registrar.ku.edu/enrollment.

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

The letter P is used only to indicate participation in thesis, dissertation, and research enrollments (related to thesis or dissertation), and in the first semester enrollment of a two-semester sequence course. In any semester, an instructor may, at his or her option, assign a letter grade of A, B, C, D, or F when evidence about performance is available. Upon completion of thesis/dissertation or research hours leading to a master’s or doctoral de-
Graduate, 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 authorization has been given, the instructor may report a grade of S for students who have satisfactorily attended the course but for whom it has not been possible to evaluate the quality of performance.

Once the S grade for a particular course (or a particular faculty member’s section of a multi-section course) has been recommended by the department and approved by the Graduate Division, it must be applied to the entire student enrollment in the course or section. This applies to those 800- or 900-level courses eligible for the S grade (or its alternative of F), as well as to Continuing Education, institute, and workshop courses. The S and U grades are not used in computing the grade-point average.

The Credit/No Credit option is not authorized for graduate students’ enrollments, including, but not limited to, courses taken to fulfill the research skills requirements, undergraduate deficiencies, etc.

The individual schools have the option of using or not using +/–, according to the policy adopted by the particular school. B– does not represent satisfactory work in graduate studies.

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

Performance is graded Honors, Satisfactory, or Unsatisfactory for the following examinations:

1. The general examination for the master’s degree.
2. The general examination for the degree of Specialist in Education.
3. The comprehensive oral examination for the doctorate.
4. The final examination for the doctorate.

**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 college. 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 is not permitted to re-enroll unless the Graduate Division 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 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.
2. The course must have been approved for the award of graduate credit.
3. The instructor must have gained appointment to the Graduate Faculty.

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

**Graduate Student School, Division, and Level Codes**

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

Graduate Studies code ........................................... G

School/College codes:

<table>
<thead>
<tr>
<th>Code</th>
<th>School/College</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Liberal Arts &amp; Sciences</td>
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**Level codes:**

- Degree-seeking students admitted to regular, probationary, and provisional status:
  - 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 (Z) ................. 9

**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.

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

All enrolled students are subject to the Board of Regents and KU Intellectual Property Policies.
Guidelines have been established 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 Graduate Studies:

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

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

For information on guidelines, contact Graduate Studies.

Intellectual Property Policy

All enrolled students are subject to the Board of Regents and KU Intellectual Property Policies. The ownership of student works submitted in fulfillment of academic requirements is retained by the creator(s). By enrolling, the student gives the institution a nonexclusive royalty-free license to mark on, modify, retain 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.provost.ku.edu.

Language and Research Skills Requirements (Doctoral Degrees)

See Doctoral Degree Programs.

Language Requirements (Master’s Degrees)

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

Leave of Absence (Doctoral Students)

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

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 as degree-seeking students and request the permission of the appropriate Graduate Division to coenroll for the final undergraduate semester. Seniors requesting the privilege of coenrollment must make formal application through the appropriate Graduate Division for admission.

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 be used to satisfy this requirement. 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.

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 advisor, 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 authorized. The activities or machines must be approved by the EHS–Radiation Safety Service and/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 adviser, or the EHS department concerning safe use and disposal requirements is mandatory. Contact EHS at (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 adviser 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–Radiation Safety Service and/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 adviser, 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 every 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 as stated in the most recent issue of the Graduate 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 are ready to answer questions and offer counsel.

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

Time Limit on Graduate Courses

See Program Time Constraints under Master’s Degree Requirements and Doctoral Degree Requirements. See also Grading.

Undergraduate Student Enrollment

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

University Faculty and Advanced Degrees

Members of the university faculty having, or eligible for, tenure or holding any rank above that of instructor will not be granted degrees or certificates. Because of the variety of appointments covered by such terms as Lecturer, Associate, or the like, every case must be considered individually, with the student’s department making a recommendation to Graduate Studies before the student begins the graduate degree or certificate program, 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, the responsibility for initiating a request for waiver of the rule lies with the student. Waivers may be granted in rare cases where the student and the department demonstrate satisfactorily that circumstances and conditions assure freedom from conflict of interest and undue influence.

Withdrawal from a Course

Complete information about withdrawing from a course is online at www.registrar.ku.edu. Select “Add/ Drop/ Change of Section” for current procedures. The Office of the University Registrar, Student Records Center, 1450 Jayhawk Blvd, Room 151, Lawrence, KS 66045-7535, (785) 864-4422, kuregistrar@ku.edu, also can provide current information.

Withdrawal from the University

Complete information about withdrawing from all classes is online at www.registrar.ku.edu. Select “Withdraw” for current procedures.

The Office of the University Registrar, Student Records Center, 1450 Jayhawk Blvd, Room 151, Lawrence, KS 66045-7535, (785) 864-4422, kuregistrar@ku.edu, also can provide current information.

Tuition and Fees

Graduate tuition for the 2007-08 academic year is $240.65 per credit hour for Kansas residents and $575.05 per credit hour for nonresidents. Required Lawrence campus fees are $377.75 per semester. For current information, see www.registrar.ku.edu/fees. Rates are subject to change at any time by the Kansas Board of Regents. Tuition and fees are assessed by the Office of the University Registrar on the Lawrence campus and the Office of the Registrar at KU Medical Center in Kansas City. Tuition and fees rates vary for students according to the program in which the student is enrolled. Students must pay tuition and fees in full by the designated date each term in order to maintain their enrollments. A full description of tuition and fees is available each semester in the online Schedule of Classes, www.registrar.ku.edu. A complete description of applicable tuition, fees, and payment deadlines is available at www.registrar.ku.edu/fees.

Students in architecture, business, education, engineering, fine arts, journalism, and pharmacy, and students on the KU Edwards Campus pay additional course fees. Students taking online courses pay an additional mediated course fee. Other additional fees may be added. See www.registrar.ku.edu/fees for current rates.

Undergraduate students who enroll in graduate-level courses (numbered 700 through 999) pay tuition at the graduate rate. Graduate students who enroll in undergraduate-level courses (numbered 000 through 499) pay tuition at the undergraduate rate.

Persons over the age of 60 may audit courses without 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.

Late Enrollment Fee

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

Residency Requirements

Kansas statutes and Board of Regents regulations govern who qualifies for resident tuition. This description does not replace or supersede the Kansas statutes or Regents’ regulations. For a copy of the statutes and regulations, write the Office of the University Registrar, Strong Hall, 1450 Jayhawk Blvd., Room 121, Lawrence, KS 66045-7535.

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

- Alumni or students of Haskell Indian Nations University
- Kansas high school graduates who enroll at a Board of Regents institution within six months of high school graduation, who were residents for tuition and fee purposes at some point in the 12 months before graduation, and who remain continuously enrolled at a Board of Regents institution
- Employees of Kansas Board of Regents institutions who are employed at least 40-percent time and are not seasonal, hourly, or temporary. Their dependents are also eligible
- Employees who are transferred or recruited to Kansas and their dependents. This privilege is valid for one year
- Military personnel and their dependents on full-time assignment at a Kansas base
- Retired military personnel who were assigned to a Kansas base for at least two years, then retired or were honorably discharged and stayed in Kansas
Books and Supplies
The cost of new textbooks and supplies varies, but is about $500 a year for most students.

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

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

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

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

Loans
KU’s student loan program is administered by the Office of Student Financial Aid, Strong Hall, 1450 Jayhawk Blvd., Room 50, Lawrence, KS 66045-7535, financialaid@ku.edu or www.financialaid.ku.edu.

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

40% or more appt. 100% of tuition 100% of 3 hours of campus fees
30% but less than 40% appt. 75% of tuition 75% of 3 hours of campus fees
20% but less than 30% appt. 50% of tuition 50% of 3 hours of campus fees
10% but less than 20% appt. 25% of tuition 25% of 3 hours of campus fees

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

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

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

1. During the term of appointment, the GTA must be admitted to and enrolled in a graduate degree program offered by KU.
2. During the term of appointment, the GTA must be enrolled in no fewer than 6 credit hours per semester. GTAs who are unable to enroll in 6 hours for medical reasons or other hardships may petition the Office of the Provost to waive this requirement. They must present supporting documentation and have the approval of the employing department (and the department of study if the two are different). Upon successful completion of the doctoral comprehensive examination and all other 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 equivalent work approved by the Office of the Provost.
3. During the term of appointment, the GTA must be in good academic standing and make satisfactory progress toward a graduate degree, as determined by Graduate Studies and the department in which the student is enrolled. Students admitted to a degree program on probationary or provisional status are not in good standing for the purpose of GTA appointments. A graduate student must maintain a cumulative grade-point average of 3.0 to remain in good academic standing. If a department judges that a graduate student whose grade-point average falls below 3.0 after the first semester at KU is nonetheless making satisfactory progress, the department may recommend to the Provost that the student be allowed to keep the GTA position for one additional semester.
4. The GTA must satisfy any and all English proficiency criteria established by the Regents and the university.
5. During the term of appointment, the GTA’s assigned duties must consist primarily of direct involvement in classroom or laboratory instruction.
6. The GTA must attend all orientation and training sessions designated as mandatory by either the university or the school or department in which the GTA is appointed. GTAs who fail to do so are subject to immediate termination of the current appointment.

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

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

The memorandum of agreement, with additional information on tuition and fee payment, appointments, wages, benefits,
and other topics of interest to GTAs, is available on the Provost’s Office Web site, www.provost.ku.edu.

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

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

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

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

5. During the term of appointment, the GRA must be in good academic standing and make satisfactory progress toward a graduate degree, as determined by Graduate Studies and the department in which the student is enrolled. Students admitted to a degree program on 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 position must be approved by the Office of the Vice 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 tuition rates. Required campus fees; Edwards Campus program, construction, union, and required fees; mediated and Continuing Education fees; housing costs; optional fees; other speciality fees; and course fees still apply. To qualify for the resident rate for fall or spring semester, the student must have a GRA appointment starting no later than the first day of the first full month of the semester and continuing through the 60th class day. To qualify for this rate during the summer, the GRA must have met the eligibility criteria for the preceding fall and spring semesters or must have a GRA appointment starting no later than the first day of the summer session and continuing through the 30th class day.

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

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

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

Non-native Speakers of English. All applicants for graduate teaching assistantships whose first language is not English, including international students and U.S. residents or citizens, must submit a score on the Test of Spoken English, administered by the Educational Testing Service at Test of English as a Foreign Language centers in the United States or abroad; a score on the TOEFL Internet-based Test (iBT), or a score on the SPOK ad ministered by the Applied English Center at KU. The minimum TSE or SPOK score necessary for an offer of an assistantship is 50 points; the minimum score for the spoken English portion of the TOEFL iBT is 26. Applicants who do not attain that score are not eligible for GTA positions but may enroll in an English course for international graduate teaching assistants offered by the Applied English Center. Upon attaining a minimum score of 50 on the SPOK, 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 the University Career Center, (785) 864-3624, www.umc.ku.edu. A listing of current jobs is available at https://jobs.ku.edu.
Student Services

Graduate Student Associations

Lawrence. All KU graduate students on the Lawrence campus are members of the Graduate and Professional Association. GPA is governed by a seven-member elected Executive Committee (GradEx). GPA lobbies for budgetary support to fund graduate student organizations, paper-presentation travel, and the Graduate Student Mentorship Award program. It offers job, grant, and scholarship information. It also represents graduate student interests in university governance, the state legislature, and grievance mediation. GPA publishes the Graduate NewsPap er (GNP) and other publications several times each year, conducts surveys on matters of graduate student concern, and cosponsors campuswide events for graduate students. The office is in 426 Kansas Union, (785) 864-4914, http://groups.ku.edu/~gpa.

KU Medical Center. The Graduate Student Council is composed of representatives from all graduate departments on the 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 interdepartmental 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, Watkins Memorial Health Center, has full-time physicians and support personnel. Hours: 8 a.m. to 8 p.m. Monday through Friday; 8 a.m. to 4:30 p.m. Saturday; 12:30 to 4:30 p.m. Sunday.

Health Insurance. An optional health insurance plan is available. All international students must have health insurance.

KU Medical Center. All students must be covered by a health insurance plan while enrolled at KUMC. Student Health Services is in 1012 Student Center Building. Hours: 7 a.m. to 7 p.m. Monday; 8 a.m. to 4:30 p.m. Tuesday through Friday. Closed on all state holidays.

KU 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.

Housing

Lawrence. KU has seven residence halls and 11 scholarship halls. Stouffer Place has apartments for married students and for students with children who live with the student parent on a permanent basis. Jayhawker Towers is an apartment complex for unmarried students. Off-campus nonuniversity housing is available.

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

Immunizations

Lawrence. All vaccines for immunizations are available through Student Health Services. All Immunization Policies and History Forms are available on the Web site, www.studenthealth.ku.edu. The following vaccinations are required:

- *Measles, Mumps, Rubella Vaccination.* All newly admitted or readmitted students born after January 1, 1957, must show proof of two vaccinations for measles, mumps, and rubella (MMR), or titters confirming immunity, before enrollment. The second MMR must have been after 1980. A copy of medical documentation including a signature by a medical professional provides proof. Student Health Services may grant exceptions for medical or religious reasons.

- *Meningitis Vaccination.* All incoming students living in university housing must either provide written documentation of immunization or sign a waiver to indicate they have been informed about the disease and vaccine and have chosen not to be immunized. The Student Health Service strongly recommends that students living in other group housing, such as sorority or fraternity houses or Naismith Hall, receive the vaccination. All other students are encouraged to consider vaccination. All students should become knowledgeable about meningitis and its symptoms.

- *Tuberculosis Screening Policy for International Students.* All newly admitted and readmitted international students must have tuberculosis screening performed by Student Health Services at Watkins Memorial Health Center when they arrive on campus.

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

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

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

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

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

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

The University of Kansas
School/Department of __________
Lawrence, KS 66045

or

The University of Kansas
Office of the Vice Provost for Research and Graduate Studies
Strong Hall, 1450 Jayhawk Blvd., Room 222
Lawrence, KS 66045-7535
rgs@ku.edu, www.rgs.ku.edu, (785) 864-8040

Academic Records and Enrollment
Student Records Center, Strong Hall, 1450 Jayhawk Blvd., Room 151
Lawrence, KS 66045-7535:
Enrollment, Transcripts, Tuition/Fee Questions, (785) 864-4423
Residency, (785) 864-4472
Veterans’ Services, (785) 864-4482
www.registrar.ku.edu

Applications. Submit your application online at www.graduate.ku.edu/GAPC. Forward all requested supporting documents to
The University of Kansas
Graduate Application Processing Center
Strong Hall, 1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

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

Bookstores
KU Bookstore, Burge Union, Level 2, 1601 Irving Hill Rd.
Lawrence, KS 66045-7557
www.kubookstore.com, (785) 864-5697
KU Bookstores, Kansas Union, Level 2, 1301 Jayhawk Blvd.
Lawrence, KS 66045-7548
www.kubookstore.com, (785) 864-4640

Career Planning Services
School of Business Career Services
Summerfield Hall, 1300 Sunnyside Ave., Room 125
Lawrence, KS 66045-7585
www.business.ku.edu, (785) 864-5591

Engineering Career Center
Eaton Hall, 1520 West 15th St., Room 1001
Lawrence, KS 66045-7621
www.engr.ku.edu/career_center, (785) 864-3891

School of Fine Arts Career Services
Murphy Hall, 1530 Naismith Dr., Room 450
Lawrence, KS 66045-3102
www.arts.ku.edu/careers, (785) 864-4466

School of Journalism and Mass Communications Career Center
Stauffer-Flint Hall, 1435 Jayhawk Blvd., Room 210
Lawrence, KS 66045-7575
www.journalism.ku.edu/services/careers.shtml, (785) 864-7648

University Career Center
Burge Union, 1601 Irving Hill Rd., Room 110
Lawrence, KS 66045-7557
www.uc.c.ku.edu, (785) 864-3624

Catalogs
Request Graduate Catalogs online at www.rgs.ku.edu
View KU catalogs online at www.catalogs.ku.edu

Child Care
Hilltop Child Development Center, 1605 Irving Hill Rd., Lawrence, KS 66045
www.hilltop.ku.edu, (785) 864-4940
Edna A. Hill Child Development Center, (785) 864-0502
(Space is limited, and both programs have waiting lists.)

Computer Resources
For information about labs and hours, see Computer Labs and Resources: www.computerlabs.ku.edu
The Kyou portal gives Lawrence and Edwards Campus students access to online services and resources at https://students.ku.edu

Concerts and Recitals
Department of Music and Dance, www.arts.ku.edu/musicdance,
(785) 864-3436
Lied Center Box Office, www.lied.ku.edu, (785) 864-ARTS (2787)
Murphy Hall Box Office, www.kutheatre.com, (785) 864-3982
Student Union Activities, www.suaevents.com, (785) 864-7469

Continuing Education
Continuing Education, 1515 St. Andrews Dr.
Lawrence, KS 66047-1625
www.continuinged.ku.edu, (785) 864-5823

Counseling, Personal
Academic Achievement and Access Center
Strong Hall, 1450 Jayhawk Blvd., Room 22
Lawrence, KS 66045-7535
www.achievement.ku.edu

Counseling and Psychological Services
Watkins Memorial Health Center, 1200 Schwegler Dr., Room 2100
Lawrence, KS 66045-7559
www.caps.ku.edu, (785) 864-2277

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

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

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

Psychological Clinic, Fraser Hall, 1415 Jayhawk Blvd., Room 315
Lawrence, KS 66045-7556
www.psych.ku.edu/psych_clinic/clinic/overview.shtml, (785) 864-4121

KU catalogs and other academic publications are online at www.catalogs.ku.edu.
The Office of Multicultural Affairs sponsors a cultural enrichment program, bringing speakers, films, and cultural and social events to the Lawrence campus.
English Proficiency
Applied English Center
Lippincott Hall, 1410 Jayhawk Blvd., Room 204
Lawrence, KS 66045-7515
www.aec.ku.edu, (785) 864-4606

Equal Opportunity
Department of Human Resources and Equal Opportunity
Carruth-O’Leary Hall, 1246 West Campus Rd., Room 101
Lawrence, KS 66045-7505
www.hreo.ku.edu, (785) 864-3686

Fellowships
The University of Kansas
Office of the Vice Provost for Research and Graduate Studies
Strong Hall, 1450 Jayhawk Blvd., Room 222
Lawrence, KS 66045-7535
cross@ku.edu, www.rgs.ku.edu

Graduate Admission Tests
For information about the
• Graduate Management Admission Test (GMAT)
• Graduate Record Examination (GRE)
• Graduate Foreign Language Tests
• Law School Admission Test (LSAT)
• Medical College Admission Test (MCAT)
• Miller Analogies Test (MAT)

Counseling and Psychological Services, Testing Services
Watkins Memorial Health Center, 1200 Schwegler Dr., Room 2150
Lawrence, KS 66045-7559
www.testing.ku.edu, (785) 864-2768

Health Service
Student Health Services
Watkins Memorial Health Center, 1200 Schwegler Dr., Room 2150
Lawrence, KS 66045-7559
www.studenthealth.ku.edu, (785) 864-9500

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
Student Housing Department, Residence Halls
Corbin Hall, 422 West 11th St.
Lawrence, KS 66045-3312
housing@ku.edu, www.housing.ku.edu, (785) 864-4560

Information and Referrals
Academic Achievement and Access Center
Strong Hall, 1450 Jayhawk Blvd., Room 22
Lawrence, KS 66045-7535
www.achievement.ku.edu, (785) 864-4064


International Students
Applied English Center
Lippincott Hall, 1410 Jayhawk Blvd., Room 204
Lawrence, KS 66045-7515
www.aec.ku.edu, (785) 864-4606

International Undergraduate Admissions
Strong Hall, 1450 Jayhawk Blvd., Room 17
Lawrence, KS 66045-7535
issapply@ku.edu, www2.ku.edu/~issapps, (785) 864-2616

Office of International Student and Scholar Services
Strong Hall, 1450 Jayhawk Blvd., Room 2
Lawrence, KS 66045-7535
iss@ku.edu, www2.ku.edu/~issfacts, (785) 864-3617

Language Laboratory
Ermal Garinger Academic Resource Center
Wescoe Hall, 1445 Jayhawk Blvd., Room 4070
Lawrence, KS 66045-7590
EGARC@ku.edu, www2.ku.edu/~egarc, (785) 864-4759

Legal Services
Legal Services for Students
Burge Union, 1601 Irving Hill Rd., Room 312
Lawrence, KS 66045-7557
legals@ku.edu, www.legalservices.ku.edu, (785) 864-5665

Libraries
Watson Library, 1425 Jayhawk Blvd.
Lawrence, KS 66045-7544
www.lib.ku.edu, (785) 864-3956

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

Multicultural Students
Office of Multicultural Affairs
Strong Hall, 1450 Jayhawk Blvd., Room 145
Lawrence, KS 66045-7535
www.oma.ku.edu, (785) 864-4351
Multicultural Resource Center, 1301 Jayhawk Blvd.
Lawrence, KS 66045
www.mrc.ku.edu, (785) 864-4350

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

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

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

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

Speech-Language-Hearing Clinic
Schiefelbusch Speech-Language-Hearing Clinic
Haworth Hall, 1200 Sunnyside Ave., Room 2101
Lawrence, KS 66045-7534
www2.ku.edu/~splh/Clinics/SchiefelbuschClinic.html, (785) 864-4690

Student Activities, Organizations, Recreation
Jaybowl, Kansas Union Recreation Center
Kansas Union, 1301 Jayhawk Blvd.
Lawrence, KS 66045-7548
www.kuactivities.com, (785) 864-3545
KU Memorial Unions, www.kubookstore.com, (785) 864-4651
KU Recreation Services, Student Recreation Fitness Center
1740 Watkins Center Dr.
Lawrence, KS 66045-7507
www.recreation.ku.edu, (785) 864-3546
Student Involvement and Leadership Center
Kansas Union, 1301 Jayhawk Blvd., Room 400
Lawrence, KS 66045-7548
www.silc.ku.edu, (785) 864-4861
Student Union Activities, Kansas Union, 1301 Jayhawk Blvd.
Lawrence, KS 66045-7548
www.suaevents.com, (785) 864-3477

KU Recr

Student Employment
University Career Center
Burge Union, 1601 Irving Hill Rd., Room 110
Lawrence, KS 66045-7557
www.ucc.ku.edu, (785) 864-3624

Student Success
Office of the Vice Provost for Student Success
Strong Hall, 1450 Jayhawk Blvd., Room 133
Lawrence, KS 66045-7535
www.vpss.ku.edu, (785) 864-4060, fax: (785) 864-5090

Students with Disabilities
Disability Resources, Strong Hall, 1450 Jayhawk Blvd., Room 22
Lawrence, KS 66045-7535
www.disability.ku.edu, (785) 864-2620 (Voice/TTD)

Study Abroad
Office of Study Abroad
Lippincott Hall, 1410 Jayhawk Blvd., Room 108
Lawrence, KS 66045-7548
www.studyabroad.ku.edu, (785) 864-3742

Testing
Counseling and Psychological Services, Testing Services
Watkins Memorial Health Center, 1200 Schwegler Dr., Room 2150
Lawrence, KS 66045-7559
www.testing.ku.edu, (785) 864-2768

University Ombuds Office
Carruth-O’Leary Hall, 1246 West Campus Rd., Room 28
Lawrence, KS 66045-7615
www2.ku.edu/~ombuds, (785) 864-7261

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

Writing Center
KU Writing Center, Wescoe Hall, 1445 Jayhawk Blvd., Room 4017
Lawrence, KS 66045-7590
www.writing.ku.edu, (785) 864-2399

KU Medical Center Campus Services

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

School/Department of __________
The University of Kansas Medical Center, Mail Stop #_________
3901 Rainbow Blvd., Kansas City, KS 66160

or
Office of the Dean of Graduate Studies
KU Medical Center, 5015 Wescoe, Mail Stop 1040
3901 Rainbow Blvd., Kansas City, KS 66160
vbiscan@kumc.edu, www.kumc.edu, (913) 588-1258

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

Bookstore
KU Medical Center Bookstore, G014 Orr-Major, Mail Stop 4036
3901 Rainbow Blvd., Kansas City, KS 66160
bookstore@kumc.edu, www.kumedbooks.com
(913) 588-2537 or (800) 262-7509

Computer Resources
Dykes Library of the Health Sciences, KU Medical Center
Mail Stop 1050, 2100 West 39th St., Kansas City, KS 66160
www.library.kumc.edu, (913) 588-7166
Telecom Help, (913) 588-7995

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

Counseling, Personal
Student Counseling Services, KU Medical Center
G116 Student Center, Mail Stop 4006
3901 Rainbow Blvd., Kansas City, KS 66160
www.kumc.edu/studentcenter/scess
(913) 588-6580, Crisis after-hours: (913) 917-6283

Educational Support Services
Learning Specialists, KU Medical Center
G116 Student Center, Mail Stop 4006
3901 Rainbow Blvd., Kansas City, KS 66160
www.kumc.edu/studentcenter/scess, (913) 588-6580

Equal Opportunity
Equal Opportunity Office, KU Medical Center
1054 Wescoe Pavilion, Mail Stop 2014
3901 Rainbow Blvd., Kansas City, KS 66160
www.kumc.edu/eoo, (913) 588-1206 (voice), (913) 588-7963 (TDD)

Health Service
Student Health Center, KU Medical Center
1012 Student Center, Mail Stop 4044
3901 Rainbow Blvd., Kansas City, KS 66160
www.kumc.edu/studentcenter/health, (913) 588-1941

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

See pages 12-14 for admission procedures.
Student Services (KU Medical Center Campus, KU Edwards Campus)

Housing
Housing Office, KU Medical Center
G116 Student Center, Mail Stop 4006
3901 Rainbow Blvd., Kansas City, KS 66160
housinginfo@kumc.edu, www2.kumc.edu/classifieds/housingads, (913) 588-4695

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

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

Loans
Office of Student Financial Aid, KU Medical Center
4003 Student Center, Mail Stop 4005
3901 Rainbow Blvd., Kansas City, KS 66160
financialaid@kumc.edu, www.kumc.edu/studentcenter/financialaid, (913) 588-5170

Registrar
(Student Records, Loan Deferments, Registration, Tuition and Fee Payment, Veterans’ Benefits)
Office of the Registrar, KU Medical Center
3001 Student Center, Mail Stop 4029
3901 Rainbow Blvd., Kansas City, KS 66160
www.kumc.edu/studentcenter/registrar, (913) 588-7055

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

Office of Student Engagement, KU Medical Center
3001 Student Center, Mail Stop 4029
3901 Rainbow Blvd., Kansas City, KS 66160
www.kumc.edu/studentcenter/erad, (913) 588-6681

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

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

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

Student Services
Student Services Division, KU Medical Center
3001 Student Center, Mail Stop 4029
3901 Rainbow Blvd., Kansas City, KS 66160
www.kumc.edu/studentcenter/dean, (913) 588-4698

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

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

Bookstore
KU Edwards Campus Bookstore, Jayhawk Central
12520 Quivira Rd., Overland Park, KS 66213-2402
www.kubookstore.com, (913) 897-8580

Computer Resources and Educational Technology
Technology Services, KU Edwards Campus
12600 Quivira Rd., Overland Park, KS 66213-2402
http://edwardscampus.ku.edu/Technology_Services/ Technology_Services_Index.htm, (913) 897-8400

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

Student Success Center
KU Edwards Campus, 12600 Quivira Rd.
Overland Park, KS 66213-2402
http://edwardscampus.ku.edu/3_CurrentStudents/ Student_Success.htm, (913) 897-8461

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

KU Info, (785) 864-3506, http://kuinfo.ku.edu, answers questions and offers information to the KU community.
Graduate Studies

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Independent scholarship, competence in research or other creative work, and the nurture of
  teaching commitment and skill are the traditional goals of graduate study.

KU has been a leader among public universities in national fellowships, producing 25 Rhodes
  scholars and 388 student Fulbright award winners since the programs began.
Goals of Graduate Study · The Graduate Faculty

Sara Thomas Rosen, Associate Vice Provost and Dean
Carole Ross, Assistant Dean
Strong Hall, 1450 Jayhawk Blvd., Room 222
Lawrence, KS 66045-7535
rgs@ku.edu or www.rgs.ku.edu, Phone: (785) 864-8040

Graduate Studies at 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. Graduate Studies consists of the Graduate Faculty, the graduate student body, and the Graduate Studies administrative organization, composed of the Office of Research and Graduate Studies and the Graduate Divisions of the schools responsible for programs leading to graduate degrees.

The University of Kansas offers the Master of Arts degree in 49 fields, the Master of Science in 35, and specific professional master’s degrees in 15 programs; the professional degree of Specialist in Education; and the Doctor of Philosophy degree in 64 fields, as well as professional doctorates of Audiology, Education, Engineering, Occupational Therapy, Physical Therapy, and Musical Arts. In these degree programs and, in increasing numbers in nondegree-oriented enrollments, on the Lawrence and Kansas City campuses and off campus, KU 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 is online at www.rgs.ku.edu. Criteria for membership in the Graduate Faculty, revised by the Graduate Council, May 3, 2006:

- **Regular Graduate Faculty Membership.** Regular members of the Graduate Faculty may teach courses for graduate credit, supervise the master’s program and thesis, serve on committees, and sit on doctoral and/or master’s committees. When appropriate, a qualified member of the Regular Graduate Faculty may be nominated to serve as co-chair of a specific dissertation committee if a faculty member with Dissertation Chair status serves as co-chair of the committee and agrees to ensure that all requirements are met. However, if the regular member of the Graduate Faculty has lost dissertation chair status, this does not apply. Present or newly appointed faculty members in tenure-track appointments 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 ac-

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

<table>
<thead>
<tr>
<th>Type of Graduate Faculty appt.</th>
<th>Employed by</th>
<th>Type of faculty appt.</th>
<th>Teach graduate courses</th>
<th>Serve on master’s &amp; doctoral committees</th>
<th>Chair2 master’s &amp; doctoral committees</th>
<th>Serve as outside member on doctoral committees</th>
<th>Chair doctoral committees</th>
<th>Co-chair doctoral committees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regular Graduate Faculty</td>
<td>KU</td>
<td>Tenure-track</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes, unless dissertation status was discontinued</td>
</tr>
<tr>
<td>Graduate Faculty with dissertation status</td>
<td>KU</td>
<td>Tenure-track</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes (if the Graduate Faculty member was previously Committee Chair)</td>
</tr>
<tr>
<td>Ad Hoc Graduate Faculty</td>
<td>Not by KU or any of its affiliates</td>
<td>Nontenure-track</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Special Graduate Faculty</td>
<td>KU or its affiliates</td>
<td>Nontenure-track</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>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 alone or co-chair a degree committee with another faculty member (i.e., both co-chairs have equal status). Degree committees cannot have both a chair and a co-chair.
tivity includes such things as effective teaching, scholarly publication, participation in professional societies, and other scholarly activity. Graduate degree programs are responsible for monitoring faculty with regular membership in the Graduate Faculty.

Chair of Doctoral Dissertation Committees (Dissertation Status).

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

Ad Hoc and Special Graduate Faculty Appointments.

When conditions warrant, Ad hoc and Special membership in the Graduate Faculty may be granted to persons who do not meet all the qualifications for Regular Graduate Faculty membership. The essential condition for such appointments is that graduate education in the department recommending the appointment will be strengthened by the appointments. Ad hoc and Special appointments are not to be used to avoid employing needed additional tenure-track faculty. Appointments that involve significant exceptions to these rules for membership come before the 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 Special membership. All nominations for Special appointments must state clearly the specific purposes for which the nomination is being sought and, when it can be known in advance, the length of time for which it is being requested. Special appointments are reviewed by the appointing graduate department and continued as appropriate. When appropriate, a qualified individual with a Special appointment may be nominated to serve as co-chair of a specific dissertation committee if a faculty member with dissertation chair status serves as co-chair and agrees to ensure that all requirements are met.

Faculty members given a notice of nonreappointment are not eligible to hold Graduate Faculty status in any category.

Graduate Studies

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

Along with the traditional undergraduate administrative structure, each school (Architecture and Urban Planning, Business, Education, Engineering, Fine Arts, Journalism and Mass Communications, Pharmacy, and for the doctoral degree Social Welfare) and the College of Liberal Arts and Sciences 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 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 general regulations. Graduate Divisions report to the Associate Vice Provost for Research/Dean of Graduate Studies on matters within the Vice Provost/Dean’s purview and refer other matters directly or through appropriate committees for action.

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

The Constitution and Bylaws were adopted in 1997. The governance bodies are the Graduate Council, the Executive Committee, and four standing committees. The Graduate Council is made up of representatives from each graduate degree-granting department or program. The Graduate Council is responsible for setting and maintaining major policies having to do with graduate education brought to it by the dean of Graduate Studies, the Executive Committee, 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 Fellowships, Scholarships, and Student Affairs; and Graduate Faculty Appointments and Authorizations. The Executive Committee is elected from the Graduate Council membership. It receives reports and recommendations from the 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.

**Fellowships and Scholarships**

A number of fellowship awards are offered to recognize academic superiority and to assist meritorious students in the timely completion of their degree programs. The number of fellowships awarded each year depends upon available funds. Applicants 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. Nominations must be made on standard forms, 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 or other means of testing and/or evaluating quality. 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. Each department may submit two nominations for each fellowship competition. This includes those with multiple graduate programs in a single department.

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 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.

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

**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 the fall and spring semesters. Awards are made during the first and fourth year of study. For students seeking only the master’s degree, the award is made only for the first year of study. 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. The award offers a stipend of $14,000 plus payment of tuition for up to 9 graduate credit hours in the fall and spring semesters. The nominating department must guarantee that the recipient will be supported for at least three succeeding years by teaching or research assistantships. 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 $12,000 to $14,000 plus payment of tuition for up to 9 graduate credit hours in the fall and spring semesters. The nominating department must guarantee that the recipient will be supported for at least three succeeding years by teaching or research assistantships for doctoral students and for one year for master’s students. The award offers a stipend of $14,000 plus payment of tuition for up to 9 graduate credit hours in the fall and spring semesters. The nominating department must guarantee that the recipient will be supported for at least three succeeding years by teaching or research assistantships for doctoral students and for one year for master’s students. The award offers a stipend of $14,000 plus payment of tuition for up to 9 graduate credit hours in the fall and spring semesters. The nominating department must guarantee that the recipient will 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.

**Dissertation Fellowships.** This one-year award includes a stipend of $14,000 plus payment of tuition for up to 6 graduate credit hours.

**Melik Graduate Fellowships.** The Melik Fellowship recruits outstanding students who will add diversity to the campus and university. Students must be U.S. citizens or permanent residents. The award provides a stipend of $10,000 plus payment of tuition for up to 9 graduate credit hours in the fall and spring semesters. Awards are made during the first and fourth or fifth year of study. Students must be nominated by their departmental or program advisers. A report is submitted 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.

**Supplemental Scholarships.** KU provides scholarship funds for up to five departments to award a new incoming doctoral student a $4,000 supplemental scholarship for three consecutive years. **Dissertation Fellowships.** This one-year award includes a stipend of $14,000 plus payment of tuition for up to 6 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.** The Melik Fellowship recruits outstanding students who will add diversity to the campus and university. Students must be U.S. citizens or permanent residents. The award provides a stipend of $10,000 plus payment of tuition for up to 9 graduate credit hours in the fall and spring semesters. Awards are made during the first and fourth or fifth year of study. 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. In addition to academic requirements the following characteristics are considered: bilingual or multilingual abilities; cultural background; ethnicity; evidence of commitment to diversity; evidence of leadership skills; first-generation college student; geographic diversity; previous career before pursuing higher education; race; service to the community; socio-economic status; urban/rural background; financial, social, family, physical, or educational hardships; or other unique contributions.

**Supplemental Scholarships.** KU provides scholarship funds for up to five departments to award a new incoming doctoral student a $4,000 supplemental scholarship for three consecutive years. **Dissertation Fellowships.** This one-year award includes a stipend of $14,000 plus payment of tuition for up to 6 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.
academic years, or a new incoming professional master’s student $3,000 for two consecutive years. These funds are awarded directly to departments before the recruitment period to help them be more competitive and attract top applicants. Departments receiving the awards must give the entire amount to one new incoming student along with a graduate teaching or research assistantship. Departments may submit only one proposal even if the department has multiple degree programs.

Graduate Teaching Assistantship for Diversity. These graduate teaching assistantships help KU create a diverse community and achieve its educational mission. These assistantships are for new U.S. citizens and permanent residents. KU and the departments share in funding a four-year appointment, authorized by the department. The student must maintain good academic standing and satisfactory employment performance to continue. Diversity requirements are listed under Melik Graduate Fellowships and Scholarships, above. 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 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. KU also maintains direct exchange programs with the University of Birmingham in England; with the École Supérieure de Commerce/University of Clermont-Ferrand in France; with the Universities of Bonn, Erlangen-Nürnberg, Hamburg, Kiel, Mainz, and Stuttgart in Germany; with the Eidgenössische Technische Hochschule (Federal Institute of Technology) in Zurich, Switzerland; and with the Universities of Nanjing, Nankai, and Zhengzhou in the People’s Republic of China.

Under the agreements with these institutions, KU graduate students receive tuition and an allowance toward maintenance for an academic year of study abroad, 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 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. Application forms and detailed information are available from International Programs, www.international.ku.edu.

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.gs.ku.edu. 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. Depending on funding, each applicant is guaranteed one allocation during his or her graduate studies, with the potential of funding for a second conference as funds are available. The Graduate Student Council contributes about three-fourths of these funds. Remaining funds come from the KU Center for Research, Inc.

Preparation Future Faculty

To support the professional development of graduate students seeking academic positions, Graduate Studies 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. Contact Graduate Studies for information.

Graduate Studies Courses

GS 700 Thesis and Dissertation Writing (4). A course focusing on the important principles for writing a thesis or dissertation. Emphasis will be placed on the traits of a thesis/dissertation chapter and the essential elements for each chapter. In tutorials, students will receive feedback on how well the writing reflects the essential chapter elements; they will also receive feedback on their grammar through online editing guides. Prerequisite: Permission of instructor. LEC

GS 710 Thesis and Dissertation Tutorials (2-6). These tutorials are designed for students who have already started to write their theses or dissertations. Students will meet with the instructor on a weekly basis to review what they have written. They will also read materials about writing effective dissertation chapters. IND

GS 750 Professional Writing (4). This class is intended for graduate students who are in the early stages of their degrees, who are writers, or who need to hone their reading and writing skills. It will help students learn the skills they need to read course materials and write papers for graduate courses. Students will read and analyze the structures of texts and do reading practices that focuses on improving reading speed and comprehension. In the work on writing, students will first be asked to write summaries, summary critiques, and comparative critiques of articles they read. In order to accomplish this, they will need to learn first and foremost to paraphrase original texts. Their final papers will be argument style research papers in which they will be asked to integrate material from readings around a central argument, comment on data or ideas, critique primary sources. Emphasis will be placed on learning to cite and quote primary materials, organize the content logically, and improve English grammar and usage. Grammar/editing tutorials will be a required component of the course. LEC

GS 800 Preparing Future Faculty (1). A course covering current issues in teaching, research, and service for graduate students seeking professional careers in academia. Prerequisite: Selection for participation in the graduate school’s Preparing Future Faculty program, or consent of instructor. LEC

GS 804 Interdisciplinary Seminar on Ethics in Science and Engineering (2-3). The course will cover basic techniques of moral reasoning, especially as applied to ethical issues in the physical sciences and engineering. Topics covered will include the ethical conduct of research, the federal and professional guidelines for different kinds of research, and the ethical dimensions of publication and professional life. Emphasis will be on practical applications, cases and student involvement. Prerequisite: Student must be enrolled in STEM discipline. LEC

Preparing Future Professionals

To support the professional development of graduate students seeking professional careers outside academia, Graduate Studies offers the Preparing Future Professionals program. It provides workshops each semester on seeking careers outside academia. Contact Graduate Studies for information.
KU Medical Center Graduate Studies Courses

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

KU Medical Center Graduate Studies Courses

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

GSMC 805 Genetics and Neoplasia (8). Foundations of Medicine is an 8-week, multidisciplinary course, taught by faculty members from basic science and clinical departments. This course integrates materials from the traditional disciplines of biochemistry, cell and molecular biology, histology, physiology, epidemiology, behavioral science, and preventive medicine. This course includes clinical skills instruction in medical history, physical examination, and cultural sensitivity. Patient cases are used where appropriate. Students participate in small group discussions, problem-based learning sessions, laboratory exercises, clinical correlations, and lectures. Performance is evaluated by means of formative and summative examinations and assessment of participation in small group discussions. LEC

GSMC 810 Inflammation and Immunity (4). This 4-week, interdisciplinary-taught course addresses basic biology of the normal immune system and the basis for immune-based and inflammatory diseases, anaplasias, myelopoiisis, responses in infection, autoimmunity, allergy, transfusions and transplantation, immune deficiencies, and therapies for these conditions — immunosuppressives, vaccines, anti-inflammatories, transplantation. The course integrates pathways with clinical skills (including history and physical examination), considers epidemiological, ethical, social science aspects of medicine, disease prevention, and the general approach to therapy. Small group discussions, web-based instruction, labs, clinical skills lab sessions, and lectures are used. Performance is evaluated on participation in small group sessions and through standardized online summative examinations. (Same as CORE 810, School of Medicine.) Prerequisite: Good standing in School of Medicine and Graduate Studies. Course intended for and required by students in the M.D.-Ph.D. Physician Scientist Program at KUMC. LEC

GSMC 820 Gastrointestinal System and Nutrition (4). This 4-week multidisciplinary course, taught by faculty members from Anatomy, Biochemistry, Medicine, Pathology, Pharmacology, and Physiology covers the normal/abnormal processes; principles of therapeutics; and gender, ethnic, and behavioral considerations affecting disease treatment and prevention of the gastrointestinal system. This course also includes clinical skills instruction of two of patient interview and examination. Students participate in small group discussions, laboratory exercises, clinical correlations, clinical skills lab sessions, and lectures and are evaluated by written tests, oral exams, and assessment of PBL and clinical skills performance. (Same as CORE 820, School of Medicine.) Prerequisite: Good standing in School of Medicine and Graduate Studies. Course limited to students in the M.D.-Ph.D. Physician Scientist Program at KUMC. LEC

GSMC 825 Renal and Endocrine System (4). This 4-week multidisciplinary course, taught by faculty members from Anatomy, Biochemistry, Medicine, Pathology, Pharmacology, and Physiology covers the normal/abnormal processes; principles of therapeutics; and gender, ethnic, and behavioral considerations affecting disease treatment and prevention of the renal and endocrine systems. This course also includes clinical skills instruction of two of patient interview and examination. Students participate in small group discussions, laboratory exercises, clinical correlations, clinical skills lab sessions, and lectures and are evaluated by written tests, oral exams, and assessment of PBL and clinical skills performance. (Same as CORE 825, School of Medicine.) Prerequisite: Medical school admission requirements, or Good standing in School of Medicine and Graduate Studies. Course limited to students in the M.D.-Ph.D. Physician Scientist Program at KUMC. LEC

The 2007 edition of U.S. News’ “America’s Best Graduate Schools” ranked 24 KU graduate programs in the top 25 among the nation’s public universities. Twelve KU programs ranked in the top 10.
## Research and Academic Support

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Research Administration

Steven Warren, Interim Vice Provost for Research and Graduate Studies, President and COO, KU Center for Research Youngberg Hall, 2385 Irving Hill Rd., Lawrence, KS 66045-7563 www.research.ku.edu

Paul Terranova, Vice Chancellor for Research, President, Research Institute, KU Medical Center Mail Stop 1039, 3901 Rainbow Blvd., Kansas City, KS 66130 www2.kumc.edu/researchinstitute

KU 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. The Carnegie Foundation classifies KU as a research-extensive doctoral institution, a classification given to the top research universities. 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 in many disciplines prepare the researchers of tomorrow. Broadening the scope of knowledge in the humanities enriches the whole population.

Important strides in the life sciences improve the quality of life for people with life-threatening medical conditions. Advances in information technology improve efficiency. All result from research, though of different types. KU continually seeks to strengthen its research, teaching, and service missions across the disciplines.

Research Administration

KU Center for Research, Inc.

President: Steven Warren, Interim Vice Provost for Research and Graduate Studies Youngberg Hall, 1285 Irving Hill Rd. Lawrence, KS 66045-7563, www.research.ku.edu (785) 864-3441, fax: (785) 864-5272

All research activity on the Lawrence and Edwards campuses is overseen by the Office of the Vice Provost for Research and Graduate Studies and managed by the KU Center for Research, Inc. OVPRGS provides intellectual leadership for KU’s research community and seeks to enlarge KU’s role as a national and international leader in research and to increase the number of research areas in which KU is prominent. KUCR, a nonprofit corporation, is the authorized KU office on the Lawrence and Edwards Campuses for the submission and negotiation of all proposals for new or continued external support of research, instructional, and service projects.

KUCR Administrative Services oversees Business Services (deposit of funds, asset management, travel, accounts payable, and equipment and property); Contract Negotiations (contract and subcontract negotiation); Facilities Management (price quotations, contractual business agreement review, leases, purchase order issue, vendor records maintenance); Financial Systems Administration; Proposal Services (proposal preparation and review, preparing budgets, current rates, code and compliance numbers); and Sponsored Project Administration (budget summary preparation, sponsored programs assistance, financial report preparation).

Finance manages budget preparation, strategic planning, investment management, and research-related compensation and appointments. Technology Transfer and Intellectual Property manages intellectual property, helps commercialize KU technologies, assists with financial management for commercialized technologies, and provides technology transfer education and outreach. Business and Industry Outreach seeks to connect KU researchers with for-profit companies for research collaborations. KUCR makes strategic financial investments in research space and equipment, faculty start-up packages, matching funds on research grants, seed funding for new projects, and research awards.

OVPRGS provides financial support and oversight to affiliated centers, institutes, and laboratories that run the gamut of topics. The Research Integrity unit also oversees research compliance (human subjects, animal care and use, conflict of interest, and scientific misconduct) and educational programs for KU’s research community, including tutorials on responsible conduct of research. The Research Communications unit coordinates the flow of internal and external public relations efforts related to Lawrence and Edwards Campus research. A research training coordinator collaborates with research and academic units to promote research training for undergraduates, graduate students and postdoctoral researchers. The directors of Research Information Technology; Business and Industry Outreach; and Therapeutics, Discovery, and Development report to the Vice Provost.

OVPRGS also supports strong, interdisciplinary research programs. Investigators are encouraged to think innovatively when seeking collaborative relationships with investigators from other KU units or other universities around the world. To enhance this effort, OVPRGS produces a monthly funding opportunities bulletin and has membership access to the Community of Science and Federal Grants and Contracts Weekly bulletin. OVPRGS personnel are available to assist investigators in searching for information from COS and other electronic resources. Strategic partnerships with other major regional research institutions also enhance the goal of large, cross-disciplinary research projects.

KUMC Research Institute, Inc.

Executive Director: Ted R. Knous, Associate Vice Chancellor for Research Administration, KU Medical Center, Mail Stop 1039 3901 Rainbow Blvd., Kansas City, KS 66160 www2.kumc.edu/researchinstitute (913) 588-1261, fax: (913) 588-5729

The Research Institute on the KUMC 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. It helps investigators identify possible funding sources and prepare applications. It announces current and potential funding opportunities, maintains reference materials, notifies investigators of items of interest, and manages all financial matters for extramural grants and contracts.

The Research Institute supports research-related committees and functions as a service to and resource for KU and its investigators in all aspects of extramural support. It is responsible for all faculty inventions, all intellectual property including patent processes, and the transfer of technologies to the public sector. It is responsible for administrative management of all funded and/or commercial clinical trials and most clinical research.

KU’s total research expenditures in fiscal year 2006 for all projects, including sponsored research, training, and service grants in all fields, were $292 million, a 3.9 percent increase over 2005.

KUCR makes information about external funding opportunities available on its Web site: www.research.ku.edu.

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**Science**

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

The Biodiversity Institute comprises the Natural History Museum and Biodiversity Research Center. The institute studies the life of the planet for the benefit of the earth and its inhabitants. It documents the fantastic diversity of life on earth, uncovers its intricate patterns, tells the grand stories that emerge from this research, and educates the next generation of biodiversity scientists.

It annually houses more than 50 students pursuing graduate degrees in collections-based biodiversity science: systematics, phylogenetics, biodiversity informatics, biogeography, palaeontology, and other fields. The museum’s 18 curators, who have joint faculty appointments in the Departments of Ecology and Evolutionary Biology and of Geology, serve as the students’ major advisers and guide their research and education programs.

With more than 8 million plant and animal specimens in its collections and support from the National Science Foundation, the institute ranks among the top five institutions in the nation. Collection strengths include the nation’s best bee and scorpionfly collections, the premier herbarium for Great Plains plants, and the world’s largest inventory of fossil plants from Antarctica; the nation’s fourth-largest inventory of reptiles and amphibians, with strength in neotropical faunas; fifth-largest mammal inventory; fourth-largest university inventory of invertebrate fossils; and ornithological, ichthyological, vertebrate paleontological, and invertebrate zoological collections. It annually appoints eight or nine graduate curatorial assistants, the collection equivalent of GTAs.

The institute leads the nation in the new discipline of biodiversity informatics, which deploys information technology to harness biodiversity data from research inventories worldwide. This vast storehouse of knowledge—the data associated with about 3 billion specimens—previously lay largely untapped. The results include new insights into the evolution of biological diversity and patterns of distribution, better understanding of natural environments, enhanced power to predict environmental phenomena, and knowledge to inform natural resource management.

Public exhibits in the museum’s Dyche Hall emphasize Kansas and the Great Plains. Graduate students may participate in public programs, including exhibits development and teaching workshops and camp programs for the public and school groups.

**Paleontological Institute**
Director: Paul Selden, selden@ku.edu
Lindley Hall, 1475 Jayhawk Blvd., Room 121
Lawrence, KS 66045-7613
http://paleo.ku.edu, (785) 864-3338, fax: (785) 864-5276

The institute is the editorial office and copublisher of the Treatise on Invertebrate Paleontology and publishes The University of Kansas Paleontological Contributions series. The 46 Treatise volumes published since 1953 aim to present a comprehensive, authoritative statement of knowledge about a group of invertebrate fossils. Twenty additional Treatise volumes are currently in preparation.

Contributing authors number more than 200 specialists from some 20 countries. The institute promotes interdepartmental cooperation in research and education of advanced paleontology students.

**Center for Child Health and Development**
Director: Chet Johnson, cjohnson5@kumc.edu
KU Medical Center, Mail Stop 4003
3901 Rainbow Blvd., Kansas City, KS 66160
www.kumc.edu/cchd, (913) 588-5900, fax: (913) 588-5916

CCHD provides service programs and interdisciplinary training for those who work with children 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. CCHD is part of the KU Center for Excellence in Developmental Disabilities program and has a Maternal Child and Health-funded Leadership Training Grant (LEND).

**Center for Environmental and Occupational Health**
Director: H. William Barkman
KU Medical Center, Breidenthal Bldg., Mail Stop 1018
3901 Rainbow Blvd., Kansas City, KS 66160
www2.kumc.edu/ceoh, (913) 588-7146, fax: (913) 588-7160

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 for Environmentally Beneficial Catalysis**
Director: Bala Subramaniam
1501 Wakarusa Dr., Suite A110
Lawrence, KS 66047-1803
www.cebc.ku.edu, (785) 864-6050, fax: (785) 864-6051

CEBC is a National Science Foundation Engineering Research Center, whose vision is to generate technologies that will transform the catalytic manufacture and use of chemicals into inherently safe and ecologically responsible processes while retaining their economic viability. Specific goals are elimination of waste and application of the principles of green chemistry and engineering to replace hazardous substances and processes. CEBC is also educating a diverse cohort of future engineers and scientists, uniquely trained in the science and engineering of economically optimized, environmentally beneficial catalytic processes.

CEBC is headquartered at KU, with core partners at the University of Iowa, Washington University in St. Louis, and Prairie View A&M University. Research progresses from the most fundamental molecular concept to technology transfer. Examples are processes in which (1) conventional organic and chlorinated solvents are either totally eliminated or significantly replaced by benign solvents such as carbon dioxide or water; (2) liquid acids are replaced by solid acids; (3) biocatalysts (enzymes/microbial cells) replace heavy metal or strong acid/base catalysts; (4) modified enzymes or enzyme mimics are implemented that are smaller, simpler, and more durable than enzymes, yet maintain their powerful selectivity and activity; and (5) raw materials are used efficiently in their conversion to desired products.
In the long term, CEBC and parallel industrial developments should transform catalytic technologies, minimizing chemical waste and enhancing process safety and energy efficiency, while improving economic viability. The potential economic benefits to the U.S. chemical industry are many billions of dollars annually and enhanced global competitiveness, accompanied by an equally dramatic ecological impact. Sociopolitical ramifications include improved public image of the chemicals industries and lower expenditures of public and private funds on regulations and litigations.

**Higuchi Biosciences Center**
Director: Elias K. Michaelis, hbc@ku.edu
2099 Constant Ave., Lawrence, KS 66047-3729
www.hbc.ku.edu, (785) 864-5140, fax: (785) 864-3578

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.

**Kansas Biological Survey**
Director: Edward A. Martinko
Takeru Higuchi Hall, 2101 Constant Ave.
Lawrence, KS 66047-3759
www.kbs.ku.edu, (785) 864-1500, fax: (785) 864-1534

The **Water Resources Division**, the **Land and Wildlife Resources Division**, and the **Information Technologies Division** of the survey include programs and centers for basic and applied research that engage survey scientists in interdisciplinary studies with other academic institutions, state and federal agencies, conservation groups, and industry. These 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 a 3,000-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: William Harrison
Moore Hall, 1930 Constant Ave., Room 305
Lawrence, KS 66047-3726
www.kgs.ku.edu, (785) 864-3965, fax: (785) 864-5317

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 and geologic hazards; 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 geographic information systems, 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. KGS also houses the KU Energy Research Center and the Data Access and Support Center.

**Landon Center on Aging**
Director: Randolph Nudo, rmudo@kumc.edu
KU Medical Center, Landon Center on Aging, Mail Stop 1005
3599 Rainbow Blvd., Kansas City, KS 66160
www2.kumc.edu/coa, (913) 588-1203, fax: (913) 588-1201

This interdisciplinary center provides resources for the development and conduct of aging-related research, coordinates research 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.

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

Research at this center investigates the biological basis of mental retardation and developmental disabilities. Programs are directed toward understanding early developmental processes, neural plasticity and repair, neurological diseases, and nervous system abnormalities underlying mental retardation and impaired cognitive development. The Smith MRRC supports research programs of more than 30 KUMC faculty members and their students, postdoctoral fellows, and staff in 15 departments, centers, and institutes. It promotes enabling technologies including DNA microarrays, bioinformatics, imaging and graphics, research design and analysis, and behavioral testing.
In 2005, KU was one of two U.S. public universities to receive a $19-million National Science Foundation grant to fund the Center for Remote Sensing of Ice Sheets.

KU has consistently ranked among the top 100 research universities nationally in research grant awards and has outpaced all other Kansas universities.
crewed aircraft to spacecraft and trans-atmospheric vehicles. The principal core competencies include computational fluid dynamics, applied aerodynamics, structural acoustics, composite materials, adaptive materials, aircraft and spacecraft design, and flight control. KU-FRL has facilities for fabricating uninhabited air vehicles and for flight testing aircraft of all types.

Infrastructure Research Institute
Director: David Darwin
Learned Hall, 1530 West 15th St., Room 2142
Lawrence, KS 66045-7609
www.irr.ku.edu, (785) 864-3826, fax: (785) 864-5631
IRI is a KUCR-affiliated center based in the Department of Civil, Environmental, and Architectural Engineering. Its multidisciplinary group of infrastructure experts from academia, industry, and government collaborate on issues related to the evaluation, maintenance, and enhancement of existing infrastructure (bridges, highways, and pavements). IRI delivers infrastructure management and solutions and serves as a clearinghouse and resource institute providing workshops, annual conferences, and newsletters. IRI brings together computer and information science, fluid mechanics, materials science and engineering, systems engineering, and urban studies to address critical needs in deterioration science, condition assessment, and renewal engineering.

Transportation Center
Associate Director: Patricia Weaver
Learned Hall, 1530 West 15th St., Room 2160
Lawrence, KS 66045-7609
www.kutc.ku.edu, (785) 864-5658, fax: (785) 864-3199
The center promotes transportation service and research activities for the state and region, including the Kansas Local Technical Assistance Program, Traffic Assistance Services to Kansas, 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, the Kansas legislature, local governments, private institutions, and public transportation providers.

Research emphases include highway engineering, transportation materials, traffic safety, bridges and culverts, intelligent transportation systems, and public transportation. The center participates in KTRAN, a cooperative research program with the Kansas Department of Transportation and Kansas State University. The center publishes a quarterly newsletter on issues affecting local transportation agencies in Kansas and the region, a quarterly newsletter focusing on rural public transportation, and a national quarterly e-zine on microcomputing applications in transportation. It sponsors conferences and workshops on transportation topics.

Tertiary Oil Recovery Project
Co-directors: G. Paul Willhite and Don W. Green
Learned Hall, 1530 West 15th St., Room 4146
Lawrence, KS 66045-7609
www.torp.ku.edu, (785) 864-3001, fax: (785) 864-4967
TORP studies oil recovery processes to increase oil production efficiency from Kansas reservoirs. The project assesses 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, carbon dioxide flooding, polymer gelation kinetics, rheology of polymers and polymer gels, and reservoir simulation. The project involves faculty and graduate students from the Department of Chemical and Petroleum Engineering and has joint research with the Department of Geology, the Kansas Geological Survey, and the Kansas oil industry.

Behavioral Sciences

Center for Research on Learning
Director: Donald D. Deshler
J.R. Pearson Hall, 1122 West Campus Rd., Room 517
Lawrence, KS 66045-3101
www.kutcr.org, (785) 864-4780, fax: (785) 864-5728
The center conducts research to enhance the learning and performance of individuals in school and nonschool 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 professional development network to teach educators 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 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 members, and doctoral students come primarily from the Departments of Special Education, Curriculum and Teaching, Psychology and Research in Education, Speech-Language-Hearing: Sciences and Disorders, Applied Behavioral Science, and Electrical Engineering and Computer Science.

Schieffelbusch Institute for Life Span Studies
Director: Steven F. Warren
Dole Center, 1000 Sunnyside Ave., Room 1052
Lawrence, KS 66045-7555, www.slsi.ku.edu/lsi
(785) 864-4295, fax: (785) 864-5323, Voice/TTY: (785) 864-5051
The institute brings together 130 scientists affiliated with 22 academic departments to study human development from its genetic origins through the final stages of life. These investigators are supported by 350 research and administrative staff members, including 85 graduate research assistants. The institute has two affiliated multidisciplinary graduate/doctoral programs, the child language doctoral program and the gerontology graduate certificate and doctoral programs, as well as several postdoctoral training programs. The institute’s 12 centers have more than 120 programs and projects that constitute basic and applied research, training, direct services, consultation, and technical assistance. Each year, thousands of practitioners, families, and agencies benefit from the Life Span Institute’s training and direct services.

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 discourse among world-class experts at events on disabilities and policies that shape university research. The Beach Center on Disability is concerned with quality of life of families and individuals affected by disability and of those who are closely involved with them. 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 and trains service providers on best practices regarding individuals with developmental disabilities and conducts mental retardation research. The Work Group for 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. The Center for Biobehavioral Neurosciences in Communication Disorders supports research on a wide range of issues relevant to the causes and treatment of communication disorders from infancy to old age. The Child Language Doctoral Program focuses on interdisciplinary academic preparation and research training of child language specialists.

Business and Government

**Center for International Business Education and Research**  
Director: Melissa Birch  
Summerfield Hall, 1300 Sunnyside Ave., Lawrence, KS 66045-7585  
[www.ciber.business.ku.edu](http://www.ciber.business.ku.edu), (785) 864-7879  
The center is one of 31 CIBERs designated by the U.S. Department of Education as national resources in international business. CIBER develops and provides international business-related courses, internships, and foreign study opportunities; promotes research and overseas experience; and serves as an instrument for educational purposes related to the region's international business community and other colleges and universities. CIBER collaborates on research and educational programs with KU's area studies centers and foreign language departments. Students interested in international business have many options including short-term overseas seminars, longer-term study in many countries, business courses on particular regions and languages, advanced international business, and field projects for credit. An M.B.A. concentration in international business and joint M.B.A./M.A. degrees in East Asian languages and cultures; Latin American studies; or Russian, East European, and Eurasian studies are offered.

**Confucius Institute at the University of Kansas**  
Executive Director: William Tsutsui  
KU Edwards Campus, Regnier Hall, Suite 270  
12600 Quivira Road, Overland Park, KS 66213  
[www.confucius.ku.edu](http://www.confucius.ku.edu), (913) 897-8613  
The Confucius Institute at the University of Kansas (CIKU) offers community Chinese language classes, provides corporate training and professional programs, supports the teaching of Chinese in the schools, and sponsors a wide range of public programs on China. Located at the KU Edwards Campus, CIKU serves communities, businesses, and schools in the Kansas City metropolitan area, throughout Kansas and Western Missouri, and across the Great Plains region. The Confucius Institute is a partnership of the University of Kansas, the Office of the Chinese Language Council International (Hanban), and Huazhong Normal University in Wuhan, China.

**Institute for Policy and Social Research**  
Director: Steven Maynard-Moody  
Blake Hall, 1541 Lilac Lane, Room 607  
Lawrence, KS 66044-3177  
[www.ipsr.ku.edu](http://www.ipsr.ku.edu), (785) 864-3701, fax: (785) 864-3683  
The Institute for Policy and Social Research brings together social scientists from a broad range of disciplines to pursue and conduct sponsored research at the international, national, regional, state, and local levels. IPSR-affiliated faculty members represent disciplines such as economics, education, environmental studies, geography, political science, public administration, social welfare, sociology, and urban planning. IPSR has five research centers: the Center for Economic and Business Analysis, the Center for Environmental Policy, the Center for International Political Analysis, the Center for Metropolitan Studies, and the Center for Research on Global Change. In addition, the institute has several work groups, including Information Policy and Law and Society. These foster collaborative projects among faculty with similar research interests.

IPSR’s grant development staff assists researchers with all stages of proposal development, beginning with identifying potential funding sources, developing and refining the proposal, preparing the budget, and finalizing the proposal for submission. IPSR assists with award administration. IPSR research is funded by the federal government, private foundations, corporations, and state and local governments.

IPSR operates the Survey Research Center, which conducts telephone, mail, and Web surveys. Other services include computing and data services, publications, and conference and workshop planning.

**Robert J. Dole Institute of Politics**  
Director: William Lacy  
2350 Petefish Dr., Lawrence, KS 66045  
[www.doleinstitute.org](http://www.doleinstitute.org), (785) 864-4900, fax: (785) 864-1414  
The Dole Institute of Politics offers programs and speakers addressing major public policy issues, promotes civic engagement, and encourages bipartisan public service. It houses public exhibits and the complete archive of former Senator Bob Dole. With 4,000 boxes of documents, the collection is the largest congressional archive in existence, making the institute a major facility for research into politics and policies of the 1960s through the 1990s. The institute sponsors high-profile events such as the Dole Lecture, the Dole Leadership Prize, the Presidential Lecture series, and the Muncy Lecture. Guests have included former president Bill Clinton; former Polish prime minister and Nobel Prize winner Lech Walesa; former secretary of state Madeleine Albright; former cabinet secretary Jack Kemp; former senators Bob Dole, George McGovern, Tom Daschle, and other members of Congress; and national journalists, pundits, and political practitioners such as Ed Rollins, Matthew Dowd, and Donna Brazile.

The Anschutz Library houses KU’s extensive holdings in science and engineering.

The National Science Foundation classifies KU as a major university receiving substantial research support.

KU’s University Theatre stages a dozen works annually at Crafton-Preyer Theatre and in an experimental space named after KU alumnus William Inge.
Visual and Performing Arts

Rand McNally’s Places Rated Almanac ranks Lawrence first in the arts among cities of 100,000 or fewer, and KU’s School of Fine Arts is one of the reasons. Its faculty and students perform or exhibit 300 times a year.

The University Dance Company presents two major programs on campus each year, performing a varied repertoire of ballet, modern, and jazz dance. The University Symphony Orchestra furnishes a treasury of aural pleasures. Three university bands perform numerous concerts on campus and on tour. The University Marching Band presents pageantry at football games. There are three jazz ensembles, two jazz choirs, and several jazz combos. The Chamber Choir and the Oread Consort are select groups of singers who perform concerts on campus and on tour. Students also perform in the Concert Choir, University Singers, Women’s Chorale, and Men’s Glee Club.

The Collegeium Musicum performs early music, both vocal and instrumental, using KU’s collection of replicas of early instruments. The Kansas Chamber Artists, including the Oread Baroque Ensemble, Kansas Brass Quintet, and Kansas Woodwinds, are faculty groups that present numerous concerts. Annual recitals feature KU artists in residence, faculty members, and visiting performers.

The Department of Design presents the Hallmark Design Symposium Series every two weeks throughout the academic year, bringing nationally and internationally prominent designers, artists, art critics, and visual art educators to campus. The Department of Art presents four nationally known visiting artists each year through Visiting Artists Lectures and Workshops. The department works with Spencer Museum of Art and other departments to sponsor additional visiting scholars, exhibitors, and speakers. Art and design faculty and students, as well as nationally and internationally known artists, exhibit work in the Art and Design Gallery in the Art and Design Building.

The Spencer Museum of Art features special exhibitions and hosts film series, tours, and talks by visiting artists and curators. The Wilcox Classical Museum displays full-scale plaster replicas of Greek and Roman sculpture, such as the Parthenon frieze and the Venus de Milo, and Graeco-Roman antiquities including vases, coins, inscriptions, and architectural terracottas.

The University Theatre stages a dozen works annually at Crafton-Preyer Theatre and in an experimental space named after KU alumnus William Inge. Recent seasons have featured productions of Hay Fever, Sister Mary Ignatius Explains It All for You, Guys and Dolls, and The Tales of Hoffman.

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 Series, and Family Series. The Mozart Festival Opera in Don Giovanni, the Pacifica Quartet, Cantus, and the Bayanihan Philippine National Dance Company flavored a recent season. Styles are equally wide-ranging: from the Emerson String Quartet to the Burning River Brass; from First Nations women’s a capella trio Ulali to national tours of Elton John and Tim Rice’s Aida and Classical Savion.

Web sites for the University Theatre, www.katheatre.com, the Lied Center of Kansas, www.lied.ku.edu, and the Department of Music and Dance, www.arts.ku.edu/musicdance, have information about upcoming recitals, concerts, and performances.

Spencer Museum of Art

Director: Saralyn Reece Hardy, spencerart@ku.edu
Spencer Museum, 1301 Mississippi St.
Lawrence, KS 66045-7500
www.spencerart.ku.edu, (785) 864-4710, fax: (785) 864-3112
The Spencer’s permanent collection is deep and diverse, currently numbering nearly 36,000 artworks and artifacts in all media. The collection spans the history of European and American art from ancient to contemporary, and includes broad and significant holdings of East Asian art. The museum currently is integrating into its holdings a large ethnographic collection that includes Native American, African, Latin American and Australian objects. Through its collection, exhibitions, and public programming, the Spencer presents distinctive opportunities for dialogue, scholarship, and reflection. Public programs offer many possibilities for students, faculty, and the community to engage with artists and thinkers from around the world. Varied programs for school children, KU students, and the public include guided tours, gallery conversations, children’s classes and gallery activities, lectures, workshops, films, and music and dance performances. The Student Advisory Board, a multidisciplinary group of undergraduate and graduate students, offers one of many opportunities for volunteer involvement. The Spencer organizes exhibitions of local, regional, national and international interest. For example, Aaron Douglas: African American Modernist presents the first nationally touring retrospective of the work of Aaron Douglas (1899-1979), a native of Topeka, Kansas, who became the foremost visual artist of the Harlem Renaissance. The exhibition opens at the Spencer in September 2007 and will travel to major venues in Nashville, Washington, D.C., and New York City. A scholarly catalogue, co-published by the Spencer and Yale University Press, accompanies the exhibition.

Humanities

Hall Center for the Humanities

Director: Victor Bailey, vbailey@ku.edu
900 Sunnyside Ave., Lawrence, KS 66045-7622
www.hallcenter.ku.edu, (785) 864-4798, fax: (785) 864-3884
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 four 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 assists in the publication of humanities journals and publishes a biannual newsletter and an annual report.

KU’s Spencer Museum of Art is open from 10 a.m. to 5 p.m. Tuesday, Wednesday, Friday, and Saturday; from 10 a.m. to 9 p.m. Thursday; and from noon to 5 p.m. Sunday. Closed Monday.

The Lied Center houses a 2,020-seat performing arts hall with state-of-the-art spatial qualities and technical production capabilities.
Research Support

Anthropological Research and Cultural Collections
1340 Jayhawk Blvd.
Lawrence, KS 66045-7550

Collections include ethnographic and archaeological items representative of indigenous cultures primarily of North America, Central and South America, Africa, and Australia/New Guinea. The archaeological collections have been recovered from sites in the North American Great Plains and Southwest, Central America, and Europe. The collections are available to support classroom instruction and research.

Biometry
Edward Brown, ebrown2@kumc.edu
KU Medical Center, 3003 Orr Major, Mail Stop 3042
3901 Rainbow Blvd., Kansas City, KS 66160
www.alliedhealth.kumc.edu/programs/biometry.htm, (913) 588-5563, fax: (913) 588-5567

The Department of Biometry helps faculty, staff, and students plan, manage, analyze, and present research data. Statisticians work with computer specialists to provide research and computer services. Scientific software and other biostatistical resources are available.

Center for Sustainability
Director: Jeffrey R. Severin
Director of Academic Programs: Stacey S. White
Carruth O’Leary Hall, 1246 West Campus Road, Room 301
Lawrence, KS 66045-7505
www.sustainability.ku.edu, (785) 864-5804

The Center for Sustainability promotes and facilitates research and other learning opportunities that address environmental improvement, economic prosperity, and social equity. The center helps develop interdisciplinary research teams, supports student research projects, sponsors service learning courses, coordinates a campuswide network of sustainability ambassadors, and promotes sustainable practices at KU.

Center of Excellence in Chemical Methodologies and Library Development
Director: Jeffrey Aube, jaube@ku.edu
Malott Hall, 1251 Wescoe Hall Dr., Room 4070
Lawrence, KS 66045-7582
www.cmld.ku.edu, (785) 864-5287, fax: (785) 864-5326

KU-CMLD is dedicated to developing new methodologies for the synthesis of diverse and chemically novel libraries of drug-like molecules. The center’s focus is the preparation of libraries that are applicable to the discovery of new chemotherapeutic agents. Compounds generated through KU-CMLD research will be submitted to testing by a variety of collaborators, including the High Throughput Screening Center at KU. The center encompasses four scientific lines of inquiry:
• Phase Trafficking. New technologies for separating and purifying combinatorial libraries
• Biomimetics. The design of new classes of biologically active molecules based on naturally occurring peptides and carbohydrates
• Combinatorial Organometallic Chemistry. More effective ways to use palladium-mediated reactions for synthesis of aromatic libraries
• Natural Products and Privileged Structures. Heterocyclic libraries based on promising “scaffolds” derived from the worlds of natural product chemistry and classical drug research

KU-CMLD involves researchers in KU’s Departments of Chemistry and Medicinal Chemistry, the University of Missouri at Kansas City, the University of Minnesota, and Iowa State University.

Environment, Health, and Safety
Director: Michael J. Russell
Burt Hall, 1540 West 15th St., Room 140
Lawrence, KS 66045-7610
www.ehs.ku.edu, (785) 864-4089, fax: (785) 864-2852

EHS helps faculty, and staff, and students minimize environmental, health, and safety risks. 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., bio-hazards, 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
Kansas NSF EPSCoR
Director: Kristin Bowman-James, nsfepscor@ku.edu
Foley Hall, 2021 Constant Avenue, Lawrence, KS 66047-3729
www.nsfepscor.ku.edu, (785) 864-3096, fax: (785) 864-3093

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 (KU, Kansas State, and Wichita State) to compete for federal and private funding. This is achieved by grants to researchers early in their careers, by focusing research support in areas with special relevance and potential in Kansas, and by improving research infrastructure at the 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.

Information Technology
Associate Provost: Donna Liss, question@ku.edu
Computer Center, 1001 Sunny Side Ave.
Lawrence, KS 66045-7520, www.technology.ku.edu
(785) 864-0100, Computing Help: (785) 864-0200

IT facilitates the use of information technologies in teaching and research for students, faculty, and staff.

Electronic Mail. IT 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.technology.ku.edu/email. Individuals can register for e-mail service at www.ku.edu/technology/online.shtml.

KU Web Site. IT 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/technology/online.shtml.

Shared Computing Resources. IT 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.technology.ku.edu/hosting for information. IT also has several program options for faculty for hosting computers.
Computing Workshops. IT offers workshops on topics including statistical software. Workshops are free to KU faculty, staff, and each semester. See www.computerlabs.ku.edu.

Computing Workshops. IT 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 two- to three-hour hands-on workshops. New topics and sessions are added each semester. See www.technology.ku.edu/training for schedules.

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

Internet1 and Internet2. IT 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. The institute focuses on cancer research, education, and patient care. The doctors at the KU Cancer Center are engaged in cancer prevention, early diagnosis of malignancies, and testing new therapies for a variety of tumors. The institute 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 laboratory to the patient. Lives depend on cancer research, and knowledge stemming from both basic and clinical research leads to better diagnoses, treatments, and prevention. The diverse backgrounds and expertise of investigators enable them to apply a multidisciplinary approach to cancer research. Faculty are learning more about cancer through ever-evolving programs in cancer prevention, cell biology, signal transduction, experimental therapeutics, and others.

Microscopy and Analytical Imaging Laboratory
Director: David Moore, dsmo@ku.edu
Haworth Hall, 1200 Sunnyside Ave., Room 1045
Lawrence, KS 66045-7534, www.mai.ku.edu, (785) 864-4380
The laboratory provides flexibly configured optical, scanning probe, and electron microscopy (FESEM and TEM) services, as well as assistance with assay development, 2-D Gel DIGE preparation scanning and analysis, and automated pattern detection and analysis in all forms of microscopy. The facility provides for both qualitative and quantitative imaging methods, help with sample preparation, and assistance with assay automation and image analysis. Major users include all disciplines and departments. Capabilities include spinning disk confocal microscopy, spectral imaging confocal microscopy, live cell environmental chambers, drug application systems, and micro-injection. Time-lapse ratiometric imaging and FRET/FRAP/FLAP, image deconvolution, and multi-well plate screening/microtitre plate imaging are also available. Scanning probe microscopy modes include AFM, conductive AFM, LFM, force modulus mapping, simultaneous sample scanned confocal microscopy and SPM, tapping mode imaging, phase-imaging, and imaging of samples in solution. The laboratory also includes a 120KV TEM, a 200KV STEM with cryo-mounts and EDS, a FESEM with EDS and EDS mapping, EBSD, Cathodo-luminescence, and Current Mapping.

Molecular Structures Group
www.msg.ku.edu/~msg
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. MSG is overseen by a steering committee of faculty members and laboratory directors. Instrument operation and maintenance are undertaken by user fees.

Biochemical Research Service Laboratory
Dmitry Yakovlev, dyakov@ku.edu
Structural Biology Center, 2121 Simons Dr.
Lawrence, KS 66047, www.brsl.ku.edu, (785) 864-4247
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, two-dimensional HPLC of proteins and peptides, solid phase peptide synthesis, analytical and preparative reversed-phase HPLC separations of peptides, proteins and small molecules, Biacore 3000 instrumentation. 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, www.msg.ku.edu/~msg/mass.html
(785) 864-3223, fax: (785) 864-3280
(labs: B025 and 3007 Malott Hall)
MSL provides chemical analysis by mass spectrometry to researchers, primarily from chemistry-related departments and KU 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, www.msg.ku.edu/~msg/mgm.html
(785) 864-1140, fax: (785) 864-5326, labs: 3058 Malott Hall and Room 121, Structural Biology Center

Molecular modeling involves computer simulations of the structure and properties of chemical and biomolecular systems. Interactive graphics and visualization tools allow users to construct and submit such simulations and to analyze complex, often multidimensional, results. The MGM laboratories support users through consultation and training in the application of modeling techniques to their specific problems and provide access to high-performance computational tools. Resources include seven SGI workstations, two Dell PCs, seven linux workstations, two linux clusters (total of 30 processors) and assorted peripherals (printers, disk, tape drives, and stereographic projection equipment). Software includes numerous programs from Tripos Associates (e.g., SYBYL, UNITY, FlexX), the InsightII, Cerius2, Discover, and Biopolymer suites from Accelrys Inc., the Molecular Operating Environment, Gaussian 98, AMBER, CHARMm, the Cambridge Crystallographic Database, the JChem informatics suite, and numerous freeware packages.

Nuclear Magnetic Resonance Laboratory
Director: David Vander Velde, dvanvdervele@ku.edu
Malott Hall, 1251 Wescoe Hall Dr., Room 3001
Lawrence, KS 66045-7582, www.msg.ku.edu/~msg/nmr2.html
Office: (785) 864-4187, Malott labs: (785) 864-4231,
Structural Biology labs: (785) 864-3746, fax: (785) 864-5326
(labs: B042 and 3002 Malott, 5 and 148B LSRL, 100 and 104 Structural Biology Center)
The laboratory maintains $5 million in NMR hardware; trains users; provides spectra on a service basis; and helps users with design, execution, and interpretation of NMR experiments. The lab’s capabilities extend from small molecules to large proteins. KU has one of the best equipped and most modern NMR facilities in the region.
The most recent additions are a Bruker Avance 800 MHz instrument, housed in KU’s Structural Biology Center along with other core facilities and instruments for studying protein structure and function, equipped with an ultrasonic transducer cold probe; and a Bruker 400 MHz instrument with a 24-position sample changer in KU’s NIH-funded Center of Excellence in Chemical Methodologies and Library Development. The other instruments are a Bruker 400 in the Structural Biology Center; Bruker 400 and 500 in Malott Hall (the 500 equipped with a cold probe and 24-position sample changer); and a Varian Inova 600 in the Multidisciplinary Research Building, also equipped with a cold probe. Most graduate students whose projects involve chemical synthesis or characterization are housed in KU’s Structural Biology Center along with other core facilities and instruments for studying protein structure and function, equipped with an ultrasonic transducer cold probe; and a Bruker 400 MHz instrument with a 24-position sample changer in KU’s NIH-funded Center of Excellence in Chemical Methodologies and Library Development. The other instruments are a Bruker 400 in the Structural Biology Center; Bruker 400 and 500 in Malott Hall (the 500 equipped with a cold probe and 24-position sample changer); and a Varian Inova 600 in the Multidisciplinary Research Building, also equipped with a cold probe. Most graduate students whose projects involve chemical synthesis or characterization are trained to use one or more of these instruments during their first year of graduate studies. The lab houses several other workstations for on-line processing of NMR data, and also site-licenses additional software for users to do so on their own computers.

Protein Structure Laboratory
Director: Weijun Huang, weijun@ku.edu
Structural Biology Center, 2121 Simons Dr., Room 115
Lawrence, KS 66047
www.psl.ku.edu, (785) 864-3772 (O), (785) 864-3787 (L)
The laboratory hosts and maintains a high-brilliance X-ray generator equipped with Raxis IV++ imaging plate and Xtream 2000 cryogenic system. It also has a wet lab for crystallization, and computing facilities for three-dimensional structure analysis. PSL provides investigators with state-of-the-art instrumentation, facilities, and expertise for all the needs in protein X-ray crystallography. PSL personnel perform or assist users in carrying out all the steps toward atomic structure determination including crystallization, data collection, structure solution, and refinement. It is an essential facility for studying the three-dimensional structures of large proteins and their complexes with binding partners, such as other proteins, DNA/RNA molecules, substrates, products, inhibitors, and potential drug molecules.

X-ray Crystallography Laboratory
Director: Victor Day, vioday@ku.edu
Malott Hall, 1251 Wescoe Hall Dr., Room 6044
Lawrence, KS 66045-7582
http://xrayweb.msg.ku.edu, (785) 864-4347, fax: (785) 864-5396
This laboratory uses diffraction methods to determine high-precision three-dimensional crystal structures of small molecules and to identify polycrystalline materials. Single crystals are studied with molybdenum radiation using the in-house Bruker SMART APEX diffractometer equipped with a charge-coupled device area detector and an Oxford Cryostream low-temperature device. Most single-crystal studies are conducted at a temperature of 100K, but studies can be performed at any temperature between room temperature and 80K. Data for very small or poorly diffracting single crystals or samples requiring highly accurate anomalous dispersion data are presently collected off-campus using copper radiation on a Bruker CCD area detector equipped with a rotating anode. A Bruker D8 Discover powder diffractometer is available for studying polycrystalline materials.

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 scientific and technological 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
www2.ku.edu/~acu, (785) 864-5587, fax: (785) 864-5305

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

Policies concerning animals used in research, teaching, and public education programs are set by animal-care committees composed of faculty, staff, and community representatives. Animal care and use programs are fully accredited by the Association for Assessment and Accreditation of Laboratory Animal Care International.
Research Support

University Libraries
Dean: Lorraine Haricombe
Watson Library, 1425 Jayhawk Blvd., Room 502
Lawrence, KS 66045-7544, www.lib.ku.edu, (785) 864-4711
Library collections at KU contain more than 4 million volumes. The University Libraries system maintains more than 45,000 current periodicals in paper and electronic format to support the research and teaching needs of the KU community. The libraries hold vast collections of microforms, photographs, maps, manuscripts, sound recordings, and other media. The libraries also provide access to a large array of networked bibliographic databases, full-text resources, and the online catalog.

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

Materials not owned by KU libraries may be requested from other libraries worldwide through the interlibrary service; students and faculty may request local delivery of KU-owned books and articles. Many items are delivered electronically to the user’s desktop or physically to a location of the user’s choice. 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 and Museum
KU Medical Center, 1020 Robinson Hall, Mail Stop 1024
3901 Rainbow Blvd., Kansas City, KS 66160
www.clendening.kumc.edu, (913) 588-7244
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. The library also supports the biomedical ethics and medical humanities curriculum by collecting contemporary secondary works in these areas. Under the auspices of its museum, the library owns hundreds of medical artifacts.

Dykes Library of the Health Sciences
KU Medical Center, 1004 Dykes Library, Mail Stop 1050
3901 Rainbow Blvd., Kansas City, KS 66160
www.library.kumc.edu, (913) 588-7166
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.

Wheat Law Library
Green Hall, 1535 West 15th St., Room 200
Lawrence, KS 66045-7577, www.law.ku.edu/library, (785) 864-3025
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 66047-3759
www.ksr.ku.edu, (785) 864-1500, fax: (785) 864-1534
KSR offers researchers and educators 3,300 acres of diverse habitats, including tallgrass prairie, oldfield, wetland, forest, successional woods, and land in agricultural management. Facilities include two laboratories, a workshop, a caretaker residence, a lath house, and irrigated garden areas. A special feature of KSR is land available for field research projects. Most tracts are within 15 miles of the Lawrence campus, including a 1,650-acre area just a 20-minute drive north of campus. Research is varied, and ranges from that undertaken by single investigators to interdisciplinary teams. Scientists study population dynamics of plants, insects, fishes, and rodents; genetic variation in populations of plants and animals; landscape ecology; restoration ecology; and effects of manipulations on terrestrial and aquatic ecosystems.

Field headquarters are at the 618-acre Nelson Environmental Study Area, which is largely devoted to experimental ecology. Researchers at NESA may access 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 devoted to a long-term study of prairie restoration and conservation. The 116-acre Hall Nature Reserve and the 108-acre Robinson Tract (with a facility for geohydrological studies and constructed wetlands) provide additional native and managed habitats for research. The 590-acre Fitch Natural History Reservation, a nature preserve protected from disturbance for 60 years, has hosted numerous long-term studies in ecological succession. Three KSR tracts comprise a 200-acre block in the Baldwin Woods area of relatively undisturbed oak-hickory forest. Recently acquired tracts adjoining NESA (160 acres) and in Anderson County (1,350 acres) provide areas for additional research with prairie ecosystems and habitat restoration.

Staff members are based at NESA; they manage facilities and help implement research projects. Various databases are maintained to support research, including climate data, species occurrences, publications, and records of land use. Data for spatial analyses with geographic information systems are available, as are aerial photographs, synoptic collections, and maps. In a typical year, about 70 faculty, staff, and 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
2502 Westbrookie Circle
Lawrence, KS 66045-4444
www.kansaspress.ku.edu, (785) 864-4154, fax: (785) 864-4586
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 128 members of the Association of American University Presses. Since its founding in 1946, the press has published more than 1,200 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 press 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

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See pages 12-14 for admission procedures.

One of the first methods of teaching deaf children to speak was developed at KU.

For help finding course descriptions, see the Directory of Courses, pages 5-6.
Academic programs at the University of Kansas Medical Center are offered through the Schools of Allied Health, Medicine, and Nursing. The Office of the Dean of Graduate Studies at KUMC handles matters related to graduate programs in Allied Health, Medicine, and Nursing.

Graduate programs in dietetics and nutrition, hearing and speech, molecular biotechnology, nurse anesthesia, occupational therapy, physical therapy, rehabilitation science, and therapeutic science are offered in Kansas City. Graduate programs in hearing and speech are offered cooperatively with the Lawrence campus. Courses are also available in such related fields as biometry.

Basic admission requirements are KU general requirements. Individual graduate programs have specific requirements including prerequisite undergraduate courses. These are listed or referenced in program descriptions.

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

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

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

Biometry

No graduate program is offered in biometry, but the following courses may be taken for graduate credit. Jurisdiction of these courses is subject to change. Contact the School of Allied Health Student Affairs Office, (913) 588-5235, for current information.

Biometry Courses

- BMTR 800 Special Topics in Biometry: _______ (1-3). Advanced courses on special topics in biometry given as the need arises. IND
- BMTR 801 Analysis of Variance (3). Methods for designing experiments including one-way analysis of variance (ANOVA), two-way ANOVA, repeated measures ANOVA, and analysis of covariance are emphasized. Post-ANOVA tests, power and testing assumptions required in ANOVA are discussed and applied. Outlier detection using robust estimators also are incorporated. Boxplots, histograms and scatterplots are used to display data. Prerequisite: PRE 710, PRE 711 or equivalent. Knowledge of statistical software, basic statistical plotting methods, p-value, two-sample t-test and simple linear regression is assumed. Cross listed with NRSG 801. LEC
- 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. Nonparametric 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. Related 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

Clinical Laboratory Sciences

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

Master of Science in Molecular Biotechnology

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

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

Employment opportunities are significantly increasing in all allied health professions.

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

Molecular biotechnology graduate students receive training in the use and application of state-of-the-art methodologies and instrumentation as well as critical thinking, troubleshooting, and communication skills.
semester), genetics (one semester), cell biology (one semester), calculus (one semester), physics (one semester).

Degree Requirements. The M.S. in molecular biotechnology is a 41-credit-hour program designed to be completed in two years if pursued full time. The core curriculum is completed in the first year. Students enroll in three semester-long practica in the summer, spring, and fall terms of the second year. Each practicum is performed at a different site to provide a different molecular biotechnology emphasis. Practicum sites emphasize bioscience research, biotechnology industrial applications, or molecular diagnostics. The practica provide extensive hands-on experience with molecular technologies as well as real-life experience in biotechnology. Students work with investigators, laboratory staff, and others in the ongoing activities of the practicum site. While students are enrolled in a practicum, their primary academic obligation is at that site; students engage full time in practicum activities (eight hours a day, Monday through Thursday). This dedicated effort allows students to understand in depth the theory and application of state-of-the-art molecular techniques and technologies. Studying at a single practicum site for a full semester allows students to gain an appreciation of the day-to-day opportunities, obligations, and realities of professionals in molecular biotechnology. Students also complete Journal Club and Scientific Writing courses during the second year of the program. During the second spring semester, a final general examination is required. This consists of a written and an oral examination. Successful completion of the written component is required before taking the comprehensive oral examination over general knowledge of molecular biotechnology concepts and applications.

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

Recommended Course Sequence

Fall Semester 1 (12 credit hours)
- BCHM 981 Thermodynamics, Protein Structure, and Analysis of Reaction Kinetics .......................................................... 3
- BCHM 892 Cell Metabolism ............................................................... 4
- CLS 710 Molecular Techniques I .......................................................... 2
- CLS 711 Molecular Techniques Laboratory I ......................................... 2

Spring Semester 1 (11 credit hours)
- ANAT 894 Cell and Developmental Biology ........................................ 5
- PHCL 901 Introduction to Research Ethics ........................................... 1
- CLS 720 Molecular Techniques II ....................................................... 2
- CLS 721 Molecular Techniques Laboratory II ....................................... 2
- CLS 730 Current Topics in Biotechnology ............................................ 1

Summer Session 1 (6 credit hours)
- BIOL 702 Laboratory Practice: Radiation Safety Procedures ............... 0.75
- BIOL 703 Radiosotopes and Radiation Safety in Research .................... 1.25
- CLS 750 Practicum I ___________________________________________________ 4

Fall Semester 2 (6 credit hours)
- CLS 751 Practicum II ........................................................................... 5
- CLS 740 Journal Club ......................................................................... 1

Spring Semester 2 (6 credit hours)
- CLS 752 Practicum III ....................................................................... 5
- Scientific Writing .................................................................................. 1
Clinical Laboratory Sciences • Communicative Disorders: Intercampus Program

learn how to search for articles and background information pertaining to selected topics, and how to present a polished, professional summary of that literature. Assigned papers for discussion and student presentations will focus on new strategies and technologies in molecular biotechnology of wide fundamental importance, or on hypothesis-based research that uses molecular biotechnological approaches. Prerequisite: Completion of (or concurrent enrollment in) CLS 710 and CLS 720. LEC

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

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

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

### Communicative Disorders: Intercampus Program

The Intercampus Program in Communicative Disorders comprises the Department of Speech-Language-Hearing: Sciences and Disorders on the Lawrence campus and the Department of Hearing and Speech on the KU Medical Center campus. Speech-Language Pathology courses are listed under Communicative Disorders: Intercampus Program in the College of Liberal Arts and Sciences chapter of this catalog. Audiology courses are listed in this chapter.

The intercampus program offers Master of Arts and Doctor of Philosophy degrees in speech-language pathology and audiology, as well as the Doctor of Audiology. The M.A. program in speech-language pathology and the Au.D. program in audiology are fully accredited by the Council on Academic Accreditation of the American Speech-Language-Hearing Association.

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www.alliedhealth.kumc.edu/programs/hearing
(913) 588-5937

**Speech-Language-Hearing: Sciences and Disorders, Lawrence:** Chair: Hugh Cats, cats@ku.edu
Dole Human Development Center, 1000 Sunnyvue Ave., Room 3001
Lawrence, KS 66045-7555, www2.ku.edu/-splh, (785) 864-0630

Professors: Barlow, J. Brandt, Cats, Ferraro, Foy, Rice

Courtesies Adjunct Professors: Brady, S. Brandt, McCall, Steele, Storms

Associate Professors: Chertoff, Jackson, Loeb, Searl, Storkel, Widen

Clinical Associate Professor: Wegner

Assistant Professors: Auer, Ferguson, Johnson

Clinical Assistant Professors: Bunce, Daniels

Clinical Instructors: Banks, Cats, Gillispie, Grosche, Haring, Johnston, Keener, Waggoner

### Audiology Courses

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

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

**AUD 697 Audiology I** (3).

**AUD 699 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 805 Introduction to Clinical Research** (1). The course will provide a comprehensive overview to clinical research. The student will gain an understanding of how to develop clinical research questions including protocol design and the factors that should be considered in initiating a clinical research study. This will include biostatistical considerations, the recruitment of study participants, regulatory issues, and data management, and defining measures and instruments. Students will gain knowledge of how to define clinical research among the various institutional entities involved with clinical research at the University of Kansas Medical Center such as the Research Institute (KI), General Clinical Research Center (GCRC) and the Human Subjects Committee (HSC). Additionally, one component of the course will focus on how to apply for funding (grantsmanship), critical appraisal of research studies, and how to present research data. Prerequisite: Consent of instructor. LEC

**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 complex acoustic stimuli and their perception as they apply to signal detection and decision theory, psychoacoustic phenomena, and speech intelligibility. Prerequisite: AUD 697 and AUD 829. LAB

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

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

**AUD 818 Vestibular Systems and Disorders** (3). 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, communicative, and social assessment and intervention with hard of hearing and deaf adults, children, and their families. Prerequisite: AUD 819 or AUD 810. LAB

**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. LAB

**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). An 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 793, AUD 842, and permission of instructor. FLD

**AUD 852 Auditory Evoked Potentials** (3). Theoretical bases, techniques, and clinical applications for auditory evoked potentials including electroencephalography, auditory brainstem response, middle and late latency and cognitive responses. Prerequisite: AUD 810, AUD 822, AUD 829, or permission of instructor. LEC

**AUD 899 Thesis** (1-10). THE

**AUD 940 Seminar in Audiology:** (1-4). Advanced study of selected topics in audiology (subject not listed) but not limited to cochlear microphonic cochlear microphonics cochlear physiology; 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 Techniques in Audiology** (1-6). FLD

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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 860. LEC

AUD 999 Doctoral Dissertation (1-12). THE

Dietetics and Nutrition
Chair: Debra Sullivan
KU Medical Center, 4019 Delph Pavilion, Mail Stop 4013
3901 Rainbow Blvd., Kansas City, KS 66160
www.dietetics.kumc.edu or jsones@kumc.edu, (913) 588-5355
M.S. Program Director: Linda Griffith, lgriffith@kumc.edu,
4093 Delph Pavilion, (913) 588-7652
Dietetic Internship Director: Rachel Barkley, rbarkley@kumc.edu,
4065 Delph Pavilion, (913) 588-7683
Professor: Carlson
Professor Emeritus: Frakes
Associate Professors: Barkley, Beyer, Hise, Sullivan
Assistant Professor: Griffith
Clinical Instructor: Baxter

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

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

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

An applicant to the M.S. program must 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
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 three 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 concepts and research results in selected topics in dietetics. LEC

DN 820 Nutrition Education Skills for School Teachers (3). This graduate level course will expand understanding of nutrition and healthy eating for classroom teachers and other professionals who work with children. The course has a special emphasis on child and adolescent nutrition and how to translate nutrition facts into classroom applications and school-based interventions. Course topics will include healthy food choices, nutrition guidelines, nutrients, energy balance and weight, child and adolescent nutrition, and nutrition education in the classroom, school-based nutrition interventions, and measuring outcomes of nutrition interventions. Prerequisite: Student must be classroom teacher or consent of instructor. LEC

DN 822 Nutrition Care Management (2-4). An intermediate level course in which students develop skills involving communication, education, and management. Prerequisite: Consent of instructor. LEC

DN 825 Clinical Education in Dietetics (1-7). Supervised practice experiences. Prerequisite: Consent of instructor. LEC

DN 826 Applied Clinical Nutrition (1-3). An intermediate level graduate course in which students learn 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 this course (DN 826 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 coursework 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. Experiences take place in hospitals, clinics, community health agencies, and other practice settings in which dietetics and nutrition services are provided. Prerequisite: Admission to the graduate program, permission of dietetic internship director or course instructor. LEC

DN 828 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

KU’s audiology program ranked fifth in the nation among public universities in the 2007 edition of U.S. News & World Report’s “America’s Best Graduate Schools.”

For SPLH courses, see the College of Liberal Arts and Sciences chapter of this catalog.
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 discussed. 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. Evolve. Prerequisite: Consent of instructor. LEC

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

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

DN 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 reading. 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 is provided the student through active participation in administration of a nutrition care delivery program. Concurrent enrollment in DN 850 is required. Prerequisite: DN 822 and DN 823 or consent of instructor. Corequisite: DN 850. LEC

DN 854 Special Problems in Dietetics and Nutrition (1-2). Directed study of special problems in nutrition or nutrition care. This course provides for the individual or group study of special problems. Through directed readings, investigations, and projects, the student acquires information with reference to questions in dietetics and nutrition not covered in organized courses. LEC

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

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

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

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

DN 870 Health Behavior Counseling (3). Theoretical and applied issues in health behavior counseling. Students will learn the theories of behavior change and how to apply these to health care issues. Specific health behaviors (i.e., dietary changes, smoking cessation, exercise adherence) will be discussed in the context of chronic 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

DN 875 Pediatric Clinical Nutrition (3). Examines physiological, biochemical and nutritional aspects of disease processes relevant to infants and children up to 18 years of age. Medical nutrition therapy for a variety of medicine conditions found in this population will be discussed including inborn errors of metabolism, food hypersensitivity, obesity, and diseases of the major organ systems. Prerequisite: DN 825. Applied Clinical Nutrition or equivalent or consent of instructor. LEC

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

DN 880 Dietary and Herbal Supplements (1-2). Designed to develop the health professional’s skills in partnering with patients to make dietary supplement decisions. Students will investigate the use of botanicals and dietary supplements in nutritional support of aging, maternal health, and wellness. Discussions on supplementation in the prevention and treatment of chronic disease will include: arthritis, cancer, cardiovascular, 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 coursework 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

DN 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

DN 899 Thesis (1-6). Scholarly essay based on research, written under the guidance of the student’s adviser. Credit given upon meeting thesis requirements for the master’s degree. Prerequisite: Consent of adviser. THES

Health Information Management

No graduate program is offered in health information management, but the following courses may be taken for graduate credit.

■ Health Information Management Courses

HEIM 510 Professional Practice Experience I (1).

HEIM 525 Database Management for EHR (3).

HEIM 540 Information System Concepts (3).

HEIM 560 Coding Systems (3).

HEIM 567 Health Care Quality Controls (3).

HEIM 580 Reimbursement (3).

HEIM 590 Knowledge Management (3).

HEIM 604 Professional Practice Experience II (2).

HEIM 640 Health Information Systems (3).

HEIM 660 Outpatient Coding Systems (3).

HEIM 661 Management Principles in Health Care (3).

HEIM 665 Topics in Health Information Management (2).

HEIM 670 Independent Study in Health Information Management (1-10).

HEIM 675 Management Seminar (2).

HEIM 680 Management Internship (3).

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 earlier in this chapter.
Nurse Anesthesia

Interim Chair: Donna Nyght, nanesthe@kumc.edu
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Associate Professor: Goodyear-Bruch
Assistant Professors: Elliott, Nyght, Weber
Instructors: Arndt, Barenklau, Hertel, Rivas

Program
The Master of Science in Nurse Anesthesia prepares the registered nurse to become a Certified Registered Nurse Anesthetist (C.R.N.A.). It is a comprehensive 36-month program that provides students with the most up-to-date knowledge and skills required for success in nurse anesthesia practice. Graduates are able to function independently or in a group practice setting.

The program’s dedication to excellence is reflected in its ranking among the top nurse anesthesia programs in the country by U.S. News’ 2007 edition of “America’s Best Graduate Schools.” The program draws on the extraordinary intellectual and clinical resources of the KU Medical Center and several outstanding clinical affiliate sites to enhance the student’s learning opportunities in all anesthesia techniques. Students have experiences in neurosurgery, orthopedics, urology, ophthalmology, burns, pediatric, regional anesthesia, obstetrics/gynecology, cardiothoracic surgery, otolaryngology, general surgery, outpatient surgery, radiologic procedures, critical care, trauma, and emergency surgery.

The program offers the curriculum in an innovative contemporary education model. The first year consists of basic sciences and the foundations of anesthesia practice with a phased introduction to clinical practice. The second and third years provide extensive clinical practice while continuing didactic education through Web-based classes and research.

The program is offered at two primary clinical sites:
- The University of Kansas Medical Center, Kansas City, Kansas
- Overland Park Regional Medical Center, Overland Park, Kansas

The curriculum is identical at both sites. Clinical experiences are similar, but actual experience depends on the availability of surgical cases.

The application deadline is July 1, and new students begin the program in the summer session. Upon graduation, students receive an M.S. in Nurse Anesthesia degree and are eligible for certification from the Council on Certification of Nurse Anesthetists. The program is fully accredited by the Council on Accreditation of Nurse Anesthesia Educational Programs, the Kansas State Board of Nursing, and the North Central Accrediting Association.

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

Departmental admission requirements:
1. The applicant must hold a license as a professional Registered Nurse (R.N.) in Kansas and Missouri, or be eligible for licensure in those states.
2. The applicant must hold a bachelor’s degree in an appropriate discipline.
3. The applicant must have at least two years of experience as a registered professional nurse with a minimum of one year of recent, full-time experience in intensive care.
4. The following courses or their equivalents must be eligible for transfer to KU as college/university credit. All courses required for admission must have been completed with a minimum grade of C and cannot be credit by examination. A Pass grade is not accepted unless the applicant provides written verification from the university that the Pass designation is equivalent to a grade of C or higher.
   - Statistics: one course containing both parametric and nonparametric content.
   - Basic Sciences: the following five science classes are required; an overall grade-point average of 3.0 on a 4.0 scale is required in these courses:
     - Chemistry (two courses that have covered the topics of inorganic, organic, and biochemistry)
     - Microbiology (one course)
     - Anatomy* (one course)
     - Physiology* (one course completed within 10 years of program start date with a minimum grade of B)
   *In lieu of separate anatomy and physiology courses, two semesters of a combined Anatomy/Physiology course are acceptable (a minimum grade of B must be attained in both courses, and both must be taken within the last 10 years).
5. The applicant must have achieved an overall grade-point average of 3.0 on a 4.0 scale for all cumulative college work.
6. The applicant must have writing skills appropriate to graduate-level education.
7. The applicant must provide three recommendations from individuals who can accurately evaluate the applicant’s clinical skills, experience, and ability to pursue graduate study. One reference is required from the applicant’s supervisor/nurse manager and two from any of the following: current or former instructor, C.R.N.A., doctor, or peer/coworker.
8. The applicant must submit a one-page typed letter outlining his or her educational and professional goals.
9. Once all application materials have been received, applicants meeting the above criteria are invited to attend a personal interview. Only applicants who attend the personal interview are considered for admission.
10. Before matriculation, all admitted students must
   - Complete ACLS and PALS and keep them current throughout the program at the student’s expense
   - Submit to a background check at the student’s expense

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

Program curriculum requirements:
- Chemistry/Physics ................................................................. 3
- Clinical Anatomy ................................................................. 4
- Anesthetic Pharmacology .................................................... 7
- Advanced Physiology ........................................................... 4
- Advanced Pathophysiology ................................................ 3
- Basic Principles of Anesthesia ............................................. 3
- Introduction to Clinical Practicum ..................................... 3
- Assessment and Monitoring in Nurse Anesthesia ............... 3
- Advanced Theory/Practice I-VI ............................................ 32
- Professionalism: Issues and Roles ..................................... 6
- Introduction to Research ..................................................... 2
- Health Care Research ....................................................... 3
- Thesis/Capstone Project ..................................................... 6

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 Practicum (2). 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
Nurse Anesthesia

“call” experiences that address the trauma patient and emergency surgical/anesthetic interventions for major gynecological, orthopedic, and vascular procedures as well as the study of the art and science of nurse anesthesia. Students will participate in case scenarios and threaded discussions via the Internet to enhance their critical thinking, problem-solving skills and ability to synthesize didactic information to the clinical environment. Online threaded discussions will be provided, allowing interaction between students, and between students and the instructor in addition, students will be required to engage in analysis of currently published research to identify “best practices” based on research evidence. Prerequisite: Permission of instructor. LEC

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

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

NURA 810 Foundations of Anesthesia Practice (4). The course introduces the student to the basic foundations of nursing anesthesia. Principles of anesthesia are integrated with the study of the art and science of nurse anesthesia. 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 states that require them to provide safe anesthetic 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 six courses relative to the study of the art and science of nurse anesthesia. Students will acquire the knowledge base pertinent to the perioperative anesthetic management of obstetrical and pediatric patients. Students will participate in case scenarios and threaded discussions via the Internet to enhance their critical thinking, problem-solving skills and ability to synthesize didactic information to the clinical environment. Online threaded discussions will be provided, allowing interaction between students, and between students and the instructor in addition, students will be required to engage in currently published research to identify “best practices” based on research evidence. Prerequisite: Permission of instructor. LEC

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

NURA 813 Advanced Theory in Anesthesia III (3). This is the third of six courses relative to the study of the art and science of nurse anesthesia. Students will acquire the knowledge base pertinent to the perioperative anesthetic management of the geriatric population and patient’s with alterations in the endocrine system. Students will participate in case scenarios and threaded discussions via the Internet to enhance their critical thinking, problem-solving skills and ability to synthesize didactic information to the clinical environment. Online threaded discussions will be provided, allowing interaction between students, and between students and the instructor in addition, students will be required to engage in currently published research to identify “best practices” based on research evidence. Prerequisite: Permission of instructor. LEC

NURA 814 Advanced Theory in Anesthesia IV (2). This is the fourth of six courses relative to the study of the art and science of nurse anesthesia. Students will acquire the knowledge base pertinent to the perioperative anesthetic management of the neonatal patient’s and the critically ill or injured. Students will participate in case scenarios and threaded discussions via the Internet to enhance their critical thinking, problem-solving skills and ability to synthesize didactic information to the clinical environment. Online threaded discussions will be provided, allowing interaction between students, and between students and the instructor in addition, students will be required to engage in currently published research to identify “best practices” based on research evidence. Prerequisite: Permission of instructor. LEC

NURA 815 Advanced Theory in Anesthesia V (3). This is the fifth of six courses relative to the study of the art and science of nurse anesthesia. Students will acquire the knowledge base pertinent to the perioperative anesthetic management of the neonatal patient’s and the critically ill or injured. Students will participate in case scenarios and threaded discussions via the Internet to enhance their critical thinking, problem-solving skills and ability to synthesize didactic information to the clinical environment. Online threaded discussions will be provided, allowing interaction between students, and between students and the instructor in addition, students will be required to engage in currently published research to identify “best practices” based on research evidence. Prerequisite: Permission of instructor. LEC

NURA 816 Advanced Theory in Anesthesia VI (3). This is the sixth of six courses relative to the study of the art and science of nurse anesthesia. Students will acquire the knowledge base pertinent to the perioperative anesthetic management of cardiothoracic cases and various transplantations. Students will participate in case scenarios and threaded discussions via the Internet to enhance their critical thinking, problem-solving skills and ability to synthesize didactic information to the clinical environment. Online threaded discussions will be provided, allowing interaction between students, and between students and the instructor in addition, students will be required to engage in currently published research to identify “best practices” based on research evidence. Prerequisite: Permission of instructor. LEC

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

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

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

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

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

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

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

NURA 833 Basic Principles of Anesthesia Practice (3). This course introduces stu- dents to the introductory principles and theories regarding the art and science of anesthesia practice. Students will develop a conceptual basis for practice gained through a systems approach applied to development of anesthesia care based upon a strong foundation in physical assessment, physiological monitoring, applications of pharmacology, anesthesia systems, physical and chemical basic sciences. Prerequi- site: Admission to the nurse anesthesia program or permission of instructor. LEC

NURA 834 Advanced Assessment and Monitoring in Anesthesia and Acute Care (5). Systems approach to advanced assessment of patients. Principals of monitor- ing in the evaluation and perioperative care of patients. Emphasis will be placed on the cardiovascular, pulmonary, endocrine, and neurologic systems and their relation to the animal patient and the assessment and monitoring of patients in the anesthesia setting. Prerequisite: Permission of instructor. LEC

NURA 838 Advanced Principles of Anesthesia Practice (4). Detailed review of dis- ease states of major systems with emphasis on the cardiovascular, respiratory, endocrine, and neuromuscular systems. Course 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 conduc- tive techniques, pharmacology of local anesthetics, anatomic, placement, and physiologic response. The course is designed to address specific surgical categories and the relevant patient care needs and risks. Completion of each course requires acquisition and refinement of clinical skills. Students will demonstrate progression in cognitive, psychomotor and affective skills appropriate to a professional nurse anesthetist. Prerequisite: Permission of instructor. LEC

NURA 850 Anesthesia Pharmacology I (3). Content includes the pharmacology of anticholinesterase agents and cholinergic agonists, sympathomimetics, alpha- and beta-adrenergic receptor agonists and antagonists, barbiturates, benzodiazepines, non-barbiturate induction drugs, local anesthetics and neuromuscular antagonists as well as an introduction to general pharmacological principles. Prerequisite: Permission of instructor. 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 Capstone Project (1-3). The capstone project is the culmination of the master’s degree course of study. The project requires a practice-focused problem to be identified and examined in depth. The student will include application of an intervention suitable to their area of focus and dissemination of the project findings to a targeted audience is expected. Prerequisite: Permission of the instructor LEC

NURA 897 Thesis (1-3). Restricted to the writing, preparation of the formal thesis, based upon student design and execution relative to the question at hand. Prerequisite: Consent of advisor and NURA 890. THÉ

Occupational Therapy

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Graduate Adviser: Jeff Radel
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Professors: Dunn, McDowd
Associate Professor: Radel
Assistant Professors: Ahmad, Chiu, Mische-Lawson, Morrison

Master of Occupational Therapy

www.ot.kumc.edu/mot

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 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 of the M.O.T. program may sit for the national certification examination for occupational therapists administered by the National Board for Certification in Occupational Therapy. After completion of this examination, the individual is an Occupational Therapist, Registered. Most states require licensure to practice. Initial state licensure is based on the successful completion of the NBCOT certification examination.

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

Eligible students should begin the application process by submitting the School of Allied Health application and fee before September 1 for early applications or before December 15 for standard applications. Complete the application process by submitting other application forms (available from the OT office) and two official college transcripts on or before these deadlines. Contact the OT office for information. If accepted, the student begins the three-year program in the summer at KUMC.

The occupational therapy admission committee reviews applications. Students who meet all eligibility criteria by the deadlines are invited to complete an interview and writing sample. Selection is based on the applicant’s strength in eligibility criteria as well as performance in the interview and writing sample.

Students for whom English is a second language should contact the department for additional information about scores on the Test of English as a Foreign Language or the Lawrence campus Applied English Center’s English Language Proficiency Test or both.

All prospective students should obtain advising from the OT education program office at KUMC or should schedule an appointment through the Freshman-Sophomore Advising Center to meet with an OT adviser on the Lawrence campus.

KU’s occupational therapy program is tied for fourth in the nation among public universities in the 2007 edition of U.S. News & World Report’s “America’s Best Graduate Schools.”

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

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

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

### Typical Course Sequence

**Summer 1 (9 credit hours)**
- OCHT 385 Human Anatomy .................................................. 6
- OCHT 395 Orientation to the Occupational Therapy Profession .......... 3

**Fall 1 (16 credit hours)**
- OCHT 401 Theory and Practice in Occupational Therapy ......................... 2
- OCHT 415 Communication and Professional Relations .......................... 1
- OCHT 420 Introduction to Level II Fieldwork ....................................... 1
- OCHT 430 Practicum I .................................................................. 2
- OCHT 435 Life Span Development from an Occupational Perspective ........ 4
- OCHT 455 Neuroscience Analysis of Occupational Performance .............. 3

**Spring 1 (14 credit hours)**
- OCHT 445 Contexts of Occupations ............................................... 2
- OCHT 462 Physical Considerations in Facilitating Occupational Performance .... 3
- OCHT 468 Facilitating Physical Performance Lab ..................................... 1
- OCHT 470 Practicum II ................................................................. 1
- OCHT 472 Psychiatric Considerations in Facilitating Occupational Performance .... 3
- OCHT 482 Analysis and Adaptation of Occupations II ........................... 2
- OCHT 495 Introduction and Assessment of Occupational Performance ....... 2

**Fall 2 (14 credit hours)**
- OCHT 704 Planning and Intervention in Occupational Therapy .................. 2
- OCHT 710 Service Management: Delivery Systems .................................. 1
- OCHT 720 Occupational Therapy Practice Models .................................... 1
- OCHT 730 Practicum III ................................................................ 2
- OCHT 783 Evidence-based Practice .................................................... 2

**Spring 2a (6 credit hours—January through March)**
- OCHT 770 Level II Fieldwork, Part 1 ................................................. 6

**Spring 2b (6 credit hours—April and May)**
- OCHT 715 Supervision, Team Relations, and Management Communication .... 1
- OCHT 725 The Research Process ..................................................... 1
- OCHT 738 Special Topics in Practice .................................................. 1-2
- OCHT 750 Case-based Clinical Reasoning .......................................... 2

**Fall 3a (8 credit hours—July through September)**
- OCHT 776 Population-based Health Care ............................................. 2
- OCHT 780 Elective Level II Fieldwork (Special Topics, optional) ................. 6

**Fall 3b (6 credit hours—October through December)**
- OCHT 775 Level II Fieldwork, Part 2 .................................................. 6

**Spring 3 (9 credit hours)**
- OCHT 735 Issues and Trends Seminar .............................................. 1
- OCHT 760 Professional Development and Leadership in Service Management .... 3
- OCHT 765 Family and Community Service Systems .................................. 2
- OCHT 790 Research Practicum ......................................................... 3

### Master of Occupational Therapy Courses

- **OCHT 680 Special Projects** (1-6).
- **OCHT 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
- **OCHT 760 Professional Development and Leadership in Service Systems** (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
- **OCHT 715 Supervision, Team Relations, and Management Communication** (1). This course emphasizes entry level skills related to supervision, teamwork, and communication within practice environments. LEC
- **OCHT 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 lab component of this class consists of two parts: 1) learning of assessment and intervention techniques specific to different practice models and 2) practice in selecting and applying appropriate practice models for different occupational performance problems. LEC
- **OCHT 725 The Research Process** (1). 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
- **OCHT 730 Practicum III** (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 in two different settings, under the supervision of an occupational therapy fieldwork educator. Students will determine the relevant variables for intervention, work collaboratively with others within the setting and analyze and reflect upon their experience as they prepare for Level II fieldwork experiences. LEC
- **OCHT 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 group study, 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
- **OCHT 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 alternative options, given a variety of situations. LEC
- **OCHT 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
- **OCHT 760 Professional Development and Leadership in Service Management** (3). Explores organizational service delivery systems and prepares for employment. Service management content will build on previous service management courses, and will develop an understanding of levels of service management and administration of service delivery systems. LEC
- **OCHT 765 Family and Community Service Systems** (2). Through lecture and seminar groups, student will use clinical reasoning to examine various systems that impact service delivery. Students will complete a program evaluation project based on their experiences during their level II fieldwork. LEC
- **OCHT 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 coursework. LEC
- **OCHT 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 coursework. LEC
- **OCHT 776 Population-based Health Care** (2). Concepts and theories related to providing health care to complex systems and aggregates in the community, state, nation and world are explored. Emphasis is placed on the promotion, maintenance and restoration of health and wellness and the prevention of disease. Internal and external environmental components which include historical, political, social and economic factors are presented. The role of the health care provider in identifying, prioritizing and meeting the health and life participation needs of aggregates is discussed. LEC
- **OCHT 780 Elective Level II Fieldwork** (3-6). An elective (optional) supervised experience in a facility meeting specific criteria. Qualified occupational therapist will supervise this experience. This fieldwork would allow students to pursue areas of
special interest. Length and time commitment of experience will be commensurate with credit hours (e.g., each credit requires 80 hours of fieldwork contact at specified site). Prerequisite: Satisfactory completion of required academic coursework and OCTH 770, LEC

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

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

Post-professional Doctor of Occupational Therapy

www.ot.kumc.edu/otd

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

General Admission Requirements. Applicants must meet general entrance requirements. Departmental admission requirements include the following:

1. Degree from an accredited entry-level occupational therapy program (college transcripts must be provided).
2. Master’s degree in occupational therapy (M.S. in OT or M.O.T.) or a related field (college transcripts must be provided). Students with bachelor’s degrees may apply but will be required to take prerequisite master’s-level course work before beginning the O.T.D. program.
3. The applicant must currently be practicing as an occupational therapist or have past experience as a practicing occupational therapist (curriculum vitae and proof of certification as an OT must be provided).
4. Four credits of general electives.
5. A brief statement of career goals (200 to 300 words).

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

Core Curriculum (33 credit hours). This is the minimum number of credit hours required. The core curriculum or the individual student’s plan may change to include additional course work.

- Evidence-based practice (2 courses) ................................................................. 6
- Professional leadership (2 courses) ................................................................. 6
- Advanced practice (3 courses and fieldwork) .................................................... 12
- Teaching (1 course, 1 practicum experience) .................................................... 6
- General elective (1 course) ............................................................................... 3

The post-professional Doctor of Occupational Therapy is an advanced-practice degree for occupational therapists who wish to upgrade their knowledge and skills to meet the increasing demands of complex practice issues.
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 earn a master’s degree.

The admission review also considers the fit between the student’s research interests and the design and goals of the program. Applicants who qualify for admission must investigate discipline-specific programs with which their interests intersect and submit a rationale for why their research and career goals can only be met by this program. The applicant’s leadership experience and potential to contribute to knowledge generation and transfer through research, teaching, or service and the extent to which the applicant’s interests and goals correspond to those of available faculty also are considered. 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 March 1 for fall admission.

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

Core Courses Offered in the Therapeutic Science Ph.D. Program

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<td>Research Proseminar</td>
<td>1</td>
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<tr>
<td>TS 900</td>
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<tr>
<td>TS 950</td>
<td>Designing Effective Knowledge Transfer</td>
<td>1-2</td>
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<tr>
<td>TS 890</td>
<td>Dissertation in Therapeutic Science</td>
<td>1-9</td>
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Elective Options. Each student selects graduate-level elective courses to complement his or her program. These selections must be approved by the student’s adviser.

Therapeutic Science Courses

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The Master of Science degree in Occupational Therapy is for professionals interested in disability issues. The Therapeutic Science doctoral program is for students whose interests in disability and quality of life require an integrated, interdisciplinary course of study.
TS 950 Designing Effective Knowledge Transfer (1). Examination of the principles of knowledge transfer and diffusion of innovation as they relate to practices in therapeutic professions. Topics include the diffusion process, change agents, innovation adoption, and current diffusion methods. Students will evaluate diffusion processes that have occurred within their own professions. May be taken more than once for a total of two credits. LEC

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

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

Physical Therapy and Rehabilitation Science

Chair: Lisa Stehno-Bittel, pptadmissions@kumc.edu
KU Medical Center, 3056 Robinson Hall, Mail Stop 2002
3901 Rainbow Blvd., Kansas City, KS 66160
www.ptrs.kumc.edu, (913) 588-6799
Professor: Stehno-Bittel
Associate Professors: Liu, Loudon, Pohl
Assistant Professors: Boyd, Cirstea, Deshpande, Kluding, Kuphal, Searls, Smirnova, Wang

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

Doctor of Physical Therapy

The Doctor of Physical Therapy program provides opportunities for students to learn the application of basic science principles to 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 degree program in physical therapy, an applicant must meet general entrance requirements. Departmental admission requirements must be completed by May 31 of the year of intended matriculation. These include

1. A baccalaureate degree from an approved college or university.
2. The following academic prerequisites:
   - Humanities: 2 courses in English composition, 1 course in speech
   - Social Sciences: 1 course in general psychology, 1 course in advanced psychology, 1 course in sociology, 1 course in human development
   - Basic Sciences: 2 semesters or equivalent of chemistry with laboratory, 2 semesters or equivalent of physics with laboratory, 2 semesters or equivalent of biology with laboratory, 1 semester or equivalent of anatomy with laboratory (may be human or mammalian), 1 semester or equivalent of human physiology with laboratory
   - Mathematics: 1 course in college algebra and trigonometry or precalculus mathematics or calculus, 1 course in statistics

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

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

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

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

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

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

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

Admission Requirements. The applicant must meet general entrance requirements. Departmental admission requirements include

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

Degree Requirements: Post-professional Program. In addition to general requirements, the basic requirements for the post-professional D.P.T. degree include successful completion of 27 credit hours of studies, including 18 hours of core courses, 6 hours of advanced core courses from a specialty area, and 3 hours of elective.

Ph.D. in Rehabilitation Science

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

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

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

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

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

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

D.P.T./Ph.D. Joint Degree Program

The joint degree program integrates the professional D.P.T. degree in physical therapy with the Ph.D. degree in rehabilitation science and clinical work experience. It offers outstanding non-clinician 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 D.P.T. 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 D.P.T. curriculum. It is expected that the equivalent of at least five years of full-time study will be needed to fulfill the requirements for both degrees.

Physical Therapy and Rehabilitation Science Courses

PHTH 872 Clinical Education IV (9). 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 800, admission into entry-level Master of Science in Physical Therapy program, or permission of instructor. LEC

PTRS 702 Physical Therapy Documentation (1). Emphasizes the development of effective documentation skills, including exposure to a variety of documentation formats and implications for proper reimbursement. Discharge classification methods, professional objectives, functional outcomes, and other data to organize patient data and identify treatment goals. With an emphasis on physical therapist practice, delivery of health care, various team structures used in providing health care, and the roles of the physical therapist assistant are provided. This course is divided into multiple homework assignments to gather information about the patient/client. The tests and measures covered include: vital signs, goniometry, manual muscle testing, sensory testing, reflex testing and patient education. Prerequisite: successful completion of the Physical Therapy Program. LEC

PTRS 703 Physical Therapy Tests and Measures (2). Students will be introduced to tests and measures used in physical therapy to gather information about the patient/client. The tests and measures covered include: vital signs, goniometry, manual muscle testing, sensory testing, reflex testing and patient education. Prerequisite: successful completion of the Physical Therapy Program. LEC

PTRS 704 Basics of Acute Care Physical Therapy (3). 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 proper body mechanics, infection control and sterile technique, basic assessment, transfers, positioning, tubes, ostomies, clinic safety procedures, tilt table usage, prescribing proper WC, applying upper and lower extremity orthoses, and using appropriate assistive devices for gait and transfers. Prerequisite: Successful completion of 1 semester of the D.P.T. curriculum or permission of instructor. LEC

PTRS 705 Physical Therapy Interventions (4). Students will apply the skills obtained in Physical Therapy Theory II to permit practical application. Prerequisites: Basics of Acute Care Physical Therapy and begin clinical problem-solving using common physical therapy treatment interventions. Topics include: intervention management with an emphasis on wound healing interventions, therapeutic modalities with an emphasis on the healing process and physical therapy interventions. Learning opportunities include lecture, laboratory, demonstration and patient interaction. Prerequisite: Admission into the D.P.T. program or permission of instructor. LEC

PTRS 710 Advanced Human Anatomy (5). The student will obtain a basic understanding of human gross anatomy with specific knowledge of upper and lower extremities, head and neck, and back. At the end of this course the student will be able to apply this knowledge to functional and clinical situations. Prerequisites: successful completion of the post-professionals D.P.T. program or permission of instructor. LEC

PTRS 711 Applied Kinesiology and Biomechanics (4). Course involves a study of joint structure, joint function, and the biomechanical principles underlying the kinetics and kinematics of human motion, including normal gait and selected pathological gait patterns. Emphasis is placed on the interaction between biomechanical and physiological factors in musculoskeletal and neuromuscular function, and the application of kinesiological principles to clinical physical therapy situations. Prerequisite: Admission into D.P.T. program or consent of instructor. LEC

PTRS 712 Pathophysiology and the Physical Therapy Diagnosis (4). Review of integrative human physiology and pathophysiology with an emphasis upon homeostasis, homeostatic mechanisms and etiologies of disease. Topics include: 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 adapted to the physical therapy student with emphasis on physical therapy diagnoses. Prerequisite: Admission into D.P.T. program or consent of instructor. LEC

PTRS 715 Applied Musculoskeletal Anatomy (3). The course involves a study of joint structure, joint function, and the biomechanical principles underlying human motion. All major peripheral joints and the spine will be studied. Application of functional anatomy to clinical physical therapy situations will be emphasized. LEC

PTRS 720 Clinical Education I (1.50). Comprised of a three week clinical practicum at an assigned facility. Students will be exposed to a clinical setting and preliminary opportunities for application of didactic course work. Emphasis will be placed on the development of communication and interpersonal skills in the clinical setting, as well as documentation and physical therapy skills and procedures that have been introduced in classes. Prerequisite: Admission into D.P.T. program or consent of instructor. LEC

PTRS 730 Clinical Education II (1.50). This course is comprised of a three week clinical practicum at an assigned facility. Students will be exposed to a clinical setting and continuing opportunities for application of didactic course work. Emphasis will continue to be placed on the development of communication and interpersonal skills in the clinical setting, as well as documentation and physical therapy skills and procedures that have been introduced in classes. Prerequisite: Successful completion of two semesters of the physical therapy curriculum (including Clinical Education I) or permission of instructor. LEC

PTRS 740 Evidence-based Orthopedic Rehab (3). Students will apply the concepts taught in Applied Musculoskeletal Anatomy and skills obtained in their individual clinical practice. This course will include discussion related to current treatment methods and techniques for treating peripheral and spinal joints. The course activities will include review of the current evidence based scientific literature related to orthopedic conditions and interventions, web-based discussion related to individual patient case scenario and lab activities associated to treatment techniques including mobilization/ manipulation, self mobilization and therapeutic exercise. Prerequisite: Entry into Post-professionals D.P.T. program or permission of instructor. LEC
Ph.D. degree in rehabilitation science prepares leaders in research and academia.

KU’s physical therapy graduate program is tied for 10th in the nation among public universities in the 2007 edition of U.S. News & World Report’s "America’s Best Graduate Schools."
Advanced Human member of the faculty. This is a two-semester course. Prerequisite: Successful completion of 4 semesters of the D.P.T. curriculum or permission of instructor. LEC

PTRS 850 Neuroscience (4). This course will introduce the principles of neuroscience and describe their application as relevant to rehabilitation science. The course will begin with the terminology of the nervous system, then cover the major functions of the peripheral, autonomic and central nervous systems. The manner with which these systems interact to produce appropriate responses to external demands will be discussed. The behavioral consequences of damage to each systems will be integrated throughout. Particular emphasis will be placed on the sensorimotor role in perception and the control of movement. Lecture and Lab. Prerequisite: Admission into D.P.T. program or consent of the instructor. LEC

PTRS 851 Control of Human Movement (2). Will combine the physiological, neurological and psychological factors that contribute to the control of voluntary movement and the learning of motor skills. Changes over the life span, as well as changes secondary to pathology will be covered, with emphasis on the effects of brain damage. The development of the control of movement, neuroplasticity, and the effects of practice will be discussed. The course will focus on the relationship of our scientific knowledge in motor control and motor learning to the practice of physical therapy. Prerequisite: Successful completion of 4 semesters of the D.P.T. curriculum or permission of instructor. LEC

PTRS 852 Neurologic Physical Therapy I (4). Will integrate neurophysiology and neuropsychology into the clinical presentation of adults with neurologic pathology. Students will learn the etiology, epidemiology signs, and symptoms of selected neurological conditions. The medical management of patients with central and peripheral nervous system disorders will be presented in relationship to the practice of physical therapy. The course will introduce examination and treatment of impairments for persons with neuromuscular disorders. Students will be presented with single case studies and progress to more complex patient problems. Prerequisites: Successful completion of the first 5 semesters of the curriculum or permission of the instructor. LEC

PTRS 853 Neurologic Physical Therapy II (4). This course will explore functional mobility deficits in patients with neurologic pathology. Building upon previous coursework, students will acquire the skills to hypothesize about the relationship of pathology, impairments, and involvement of other systems to functional deficits for adults with neurologic pathology. Contemporary motor control and motor learning theories and research evidence will be emphasized in the development of appropriate intervention programs. Psychosocial factors will also be considered in the discussion of complex patient cases. Prerequisites: Successful completion of 6 semesters of the D.P.T. curriculum or permission of the instructor. LEC

PTRS 855 Pharmacology for Physical Therapists (1). Pharmacological background for the clinical treatment of patients referred to physical therapy. Fundamentals of the actions of drugs including mechanisms of therapeutic and adverse effects. Prerequisites: Admission into D.P.T. program or consent of instructor. LEC

PTRS 856 Evidence-based Rehabilitation (3). This course will provide students with the applied knowledge to medically screen patients for symptoms and signs that require the expertise of other health care professionals. Patient cases currently treated by the practicing physical therapist will be used to compare diagnostically related cases. The course will focus on differential diagnosis and treatment. The course will be delivered through the web. Prerequisite includes admission into the D.P.T. program or approval of the instructor. LEC

PTRS 860 Evidence-based Research Practicum I. (1). Supervised and directed experiences in conducting evidence-based research activities. The research activities involved in this course are broadly defined with emphasis on the enhancement of evidence-based physical therapy practice. The student will be supervised by a member of the faculty. This is a two-semester course. Prerequisite: Successful completion of the first 5 semesters of the curriculum or permission of instructor. LEC

PTRS 861 Evidence-based Research Practicum II (1). Supervised and directed experiences in conducting evidence-based research activities. The research activities involved in this course are broadly defined with emphasis on the presentation and communication of research. The student will be supervised by a member of the faculty. Prerequisite: Enrollment in D.P.T. program or consent of instructor. RSHE

PTRS 862 Pathology of Human Function I (4). A study of the biology of pathological processes that impair human function will highlight the mechanisms by which cell/tissue reaction adapt as a result of injury and aging. Emphasis will be placed on the functional impairments resulting from the pathological condition, and on the body’s endogenous ability to adapt or reverse the effects of disease and injury. Prerequisite: Entry into the Ph.D. program in Rehabilitation Science or consent of instructor. LEC

PTRS 863 Pathobiology of Human Function II (4). A study of biology and pathological processes that impair human function with emphasis on neuromuscular diseases, injury and diseases of the central and peripheral nervous systems, and neurological disorders associated with aging. Prerequisite: Entry in the Ph.D. program in Rehabilitation Science or the consent of the instructor. LEC

PTRS 865 Independent Study (1-3). Individually negotiated learning experiences appropriate to the interests and background of the student. Prerequisite: Admission to the DPT program, Post-Professional D.P.T. Program or permission of instructor. IND

PTRS 870 Teaching Practicum (1-3). Directed experiences in a planned instructional activity. Student will write course objectives, plan and deliver lectures, produce practical and written exams and assign grades. Prerequisite: Entry in the Ph.D. program in Rehabilitation Science or consent of instructor. LEC

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

PTRS 875 Clinical Practicum (1-3). Specialized clinical training in a highly specific area of specialization. This will broaden the course of the student to develop advanced clinical skills in his/her area of specialization. Prerequisite: Admission to the post professional program or consent of instructor. CLN

PTRS 876 Administration in Physical Therapy (3). Designed to familiarize the entry-level therapist with contemporary issues in health care which impact the delivery of physical therapy, business development and entrepreneurial skills, and organizational and human resource skills. Changes in the US health care system will be discussed, including managed care concepts, essential elements and principles of management in health care organizations, and an overview of human resource, marketing, fiscal and operational management. Prerequisite: Admission in the D.P.T. program or consent of instructor. LEC

PTRS 880 Differential Diagnosis of General Medical Conditions (3). Designed to develop skills with the knowledge and elements and anatomy of common patient presentations for the presence of symptoms and signs that require the expertise of other health care professionals. It will focus on diagnoses that are not covered by common PT practice including diseases of the endocrine system, the immune system, GI system, and neoplasias. Prerequisite: Successful completion of the first 3 semesters of the D.P.T. curriculum or permission of the instructor. LEC

PTRS 920 Clinical Education VI (9). Eighteen weeks of clinical practice in either of two different practice settings for nine weeks, or three different practice settings for six weeks. 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: Successful completion of seven semesters of the physical therapy curriculum (including Clinical Education I, II, III, IV & V). CON

PTRS 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 Science or the consent of the instructor. LEC

PTRS 961 Advanced Studies in Neurorehabilitation (3). Rehabilitation of adults with neurological disorders associated with developmental and aging. Prerequisite: Successful completion of the D.P.T. program in Rehabilitation Science or the consent of the instructor. LEC

PTRS 970 Instrumentational Analysis of Human Function (3). An in-depth study that provides critical analysis of equipment and other resources used in analyzing human motion, balance, strength, electrophysiological responses, and cardiorespiratory function. Students will be required to conduct a preliminary study, including design, methodology and data collection using one or more of these instruments. Prerequisite: Entry in the Ph.D. program in Rehabilitation Science or the consent of the instructor. LEC

PTRS 990 Dissertation in Rehabilitation Research (1-10). For students in advanced standing enrolled in the doctoral program in Rehabilitation Science. THE UNIVERSITY OF KANSAS 2007-2009

For online information about graduate programs in the School of Allied Health, see www.alliedhealth.kumc.edu.
See pages 12-14 for admission procedures.

Students in architecture work closely with faculty members in design studios and are encouraged to seek as many different design critics as possible during their studies.
Architecture

John C. Gaunt, Dean
Michael Swann, Associate Dean
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Lawrence, KS 66045-7614
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Architecture

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Professors: Diaz, Grabow, Lesnikowski, Major, Mayo, Newton, Pran, Rockhill, Spreckelmeyer

Associate Professors: Barrière, Carswell, Criss, Diaz Moore, Gore, Jackson, Luckey, Padget, Richardson, Sander, Sanguinetti, Swann

Assistant Professors: Chang, Corser, Huppert, L’Heureux, Ramaswami

The School of Architecture and Urban Planning offers four distinct plans for graduate study:

1. A Master of Architecture (M.Arch.), a professional degree for students already holding bachelor’s degrees in any field (those with architecture degrees are considered for advanced placement);

2. A Master of Arts in Architecture (M.A.)—Academic/Research Track, for students interested in the study of architecture from an academic and scholarly perspective;

3. A Master of Arts in Architecture (M.A.)—Architectural Management Track, for students interested in management issues confronting contemporary professional architecture practice; and

4. A Doctor of Philosophy in Architecture (Ph.D.) for students interested in engaging in robust, innovative inquiry that adds to the body of knowledge in architecture and its related fields.

Only the Master of Architecture is a professional degree. The other degrees are post-professional degrees that do not place the student on the path for architectural registration. Students seeking a career change into a professional curriculum, should apply for admission to the Professional M.Arch. degree.

Facilities

The School of Architecture and Urban Planning is in Marvin Hall and several adjacent buildings on KU’s main campus in Lawrence. Built in 1907, Marvin Hall was completely renovated in 1979-80 and received design awards from the Kansas City Chapter of the American Institute of Architects and the Kansas Preservation Alliance. Housed in Marvin Hall are the Hatch Reading Room and Slide Library. The privately financed reading room contains architectural references, domestic and foreign journals, and dedicated workstations. It complements KU’s Art and Architecture Library which holds more than 170,000 volumes. Almost 100,000 architectural images are housed in the school’s slide library and about half of these are included in a digital image library. Marvin Hall also contains the school’s Computing Center, separate woodworking and metal shops, a photography lab, three 24-hour computer labs, more than 20 digital studios, a gallery, classrooms, conference rooms, and faculty offices. In nearby Snow Hall and Marvin Studios, the school has additional studios, offices, and display spaces as well as an acoustics lab, an illumination lab, two 24-hour computer labs, a model-building shop, and CNC router and laser labs. A much-used Building Yard is situated behind Marvin Hall. The school also operates a large building materials lab on KU’s west campus in Lawrence. An additional digital studio, the Kansas City Urban Design Studio, is in downtown Kansas City, Missouri, at the Kansas City Design Center, a collaborative outreach center administered jointly by the architecture schools at the University of Kansas and Kansas State University.

Admission

Regardless of background or career goals, a person whose previous records indicate the ability to succeed with advanced work may be admitted to one of the graduate programs. Admission requires a bachelor’s degree and a grade-point average of 3.0 from KU or another accredited institution or foreign university with substantially equivalent requirements for the bachelor’s degree. The academic background is reviewed before a student without a bachelor’s degree is admitted as a degree-seeking graduate student at KU. A complete application for admission consists of the following materials:

1. Graduate application form.
2. One official transcript from all colleges or universities attended, showing receipt of a bachelor’s degree.
3. Three letters of recommendation from persons qualified to comment on the applicant’s intellectual abilities and probable success in graduate study.
4. Application fee, nonrefundable check or money order payable to the University of Kansas (See Admission in the General Information chapter of this catalog for further information).
5. Evidence of language proficiency if the native tongue is not English, including
   (a) A degree from an English-language college or university or
   (b) A Test of English as a Foreign Language score of 600 (paper based) or 250 (computer-based) or higher, with no less than 57 on each part (paper-based).
6. A statement of interest indicating the applicant’s career goals and the relationship of these goals to the specific option chosen. Those seeking advanced placement in the M.Arch. program should make this clear in this statement.
7. A portfolio of work demonstrating the candidate’s strengths. Examples may include design or creative work and writing samples. The portfolio must not be longer than 10 pages. CD submissions are permissible, but they should be edited for precision. (The portfolio is not required as part of the application for admission to the Architectural Management track of the M.A. in Architecture).
8. For international students, a financial statement showing minimum financial support for the first year of study (see the admissions page on the school’s Web site).

Application fees: Domestic students in architecture: paper $55, online $45. International students in architecture: paper $60, online $55.

Graduate students in architecture have the opportunity to participate in the school’s nationally recognized Historic American Buildings Survey courses.
Submit your application online at www.graduate.ku.edu/GAPC. Send original transcripts of all completed college and university course work to:

The University of Kansas
Graduate Application Processing Center
Strong Hall, 1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

Send all other requested application materials to:

The University of Kansas
School of Architecture and Urban Planning
Marvin Hall, 1465 Jayhawk Blvd., Room 206
Lawrence, KS 66045-7614

Be sure to check the school’s Web site for updates to the admissions process or requirements.

Master of Architecture Degree Program

A student who wishes to pursue a professional career as a licensed architect may apply for admission to this program. This degree is accredited by the National Architectural Accrediting Board (NAAB), the sole agency authorized to accredit U.S. professional degree programs in architecture. Students who have completed course work in an approved NAAB architecture curriculum or a preprofessional architectural degree program may achieve advanced standing. All requests for advanced standing are evaluated using the minimum qualifications for graduate study at KU, 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/synthesis experiences, each of which is accompanied by associated professional graduate courses constituting a total of 118 credit hours. One session 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.

There are four typical entry points to this curriculum:

1. Students without backgrounds in architecture who hold bachelor’s degrees in nondesign-oriented disciplines enter the first year of the curriculum, which begins in the summer session. Year One of the curriculum is two academic semesters and two summer sessions. The total number of credit hours required for graduation is 118.

2. Students without backgrounds in architecture who hold bachelor’s degrees in a design discipline usually begin course work with the Fall Semester of the First Year. Other curricular requirements may potentially be waived after a careful vetting of the student’s educational background. The total number of credit hours required for graduation is likely to be 109.

3. Students with a preprofessional degree in architecture, such as a Bachelor of Science in Architectural Studies, are likely to be placed in the second year of the curriculum (This is commonly referred to as the 4+2 option. Students interested in being placed in this way should make this clear in their statements). These students normally are asked to complete four studios (synthesis experiences), a study abroad summer experience, and architecture support courses whose number and content are determined on a case-by-case basis. The total number of credit hours required for graduation depends on the student’s previous preparation and is highly variable, but is likely to be approximately 75 hours.

4. Students who already possess an accredited professional Bachelor of Architecture degree generally enter a three-semester program that requires a study abroad experience during a summer session as well as the final year of the curriculum. The total number of credit hours required for graduation depends on the student’s previous preparation and is highly variable, but is likely to be approximately 36 hours.

Curriculum. The curriculum is designed in three parts. The first two semesters plus two summer sessions offer an accelerated education in the foundations of architecture as a professional discipline. The second academic year emphasizes professional development, with the comprehensive studio as a capstone experience. The third and final year offers students a choice of options for an inquiry of enhanced depth typical in graduate education. This allows students to develop a specialization by the time they complete the professional degree. The timing of course offerings is subject to change. Please visit the school Web site for the most current information.

Summer Session

Fall Semester

Spring Semester

Slid Session

Summer Session

Fall Semester

Spring Semester

Summer Session

Master of Arts Degree Programs

The post-professional M.A. in Architecture offers two distinct programs. The first course of study is a research-based academic program on the Lawrence campus. It is for the student who is interested in exploring various approaches in analyzing the built environment. A student with an undergraduate degree in architecture or a related discipline may enter this course of study. To receive the master’s degree, each student must complete an academic or design-related project or must take a comprehensive examination at the end of the plan of study.

The second course of study is the architectural management post-professional program, on the KU Edwards Campus in Kansas City. This course of study focuses on management issues in the practice of architecture. It is structured to be completed on a part-time basis.

For this program, please contact:

The University of Kansas Edwards Campus
12600 Quivira Rd.
Overland Park, KS 66213-2402

Telephone (from Lawrence): 864-8400 or (913) 897-8400 (from other locations), http://edwardscampus.ku.edu.


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 pur-
sue graduate study in architecture at KU must submit a statement of intent detailing academic interests and career goals. Because admission depends on the student’s objectives and the faculty’s matching research interests, potential applicants should contact the coordinator before submitting applications. Students from this program have established a strong academic tradition and won honors in national research competitions. The key to their success has been the careful selection of research topics and the ways these topics have paralleled the academic and professional interests of the architecture faculty.

For students admitted to the academic/research program at the master’s level in architecture in Lawrence, a total of 36 credit hours of course work is required. Each student must enroll in a 3-hour introductory course dealing with research methods and theory and must complete an additional 12-hour core of course work that addresses each of the four areas: (1) history/theory, (2) technology/practice, (3) design/methods, and (4) urban/social issues. In addition to the core courses, each student must complete a minimum of 15 graduate credit hours in a sequence of courses in one of the four concentrations. A minimum of 6 of these hours must be taken in one of the established concentrations. With the consent of the student’s 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 Planning. Six hours in the 36-hour course of study are composed of course work in which the student prepares a written project or thesis, or in additional course work in the student’s concentration to prepare for a final written examination.

Following is a selected list of recently offered courses in each of the four concentrations. Students should consult the most current course listing of the architecture program to determine which courses will be offered each semester.

**History/Theory**
- Architectural History
- Theory and Context of Architecture
- Early Renaissance Architecture
- Language of Modern Architecture
- American Landscapes
- The Art of Representation
- Current Directions in Architecture

**Technology/Practice**
- Building Mechanical and Energy Systems
- Construction and Project Management
- Material Investigation
- Structural in Nature and Architecture
- Listening to Architecture
- Electro-Acoustics
- Visualizing Airflow

**Design/Methods**
- Computer Applications
- CAD/CAM Applications
- GIS Applications
- Architectural Photography
- Advanced Architectural Presentation Techniques

**Urban/Social Issues**
- Homeplaces
- History of Urban Design
- Reading the American City
- Architecture of Health
- The Making of Place in an Aging Society

**2. Master of Arts in Architecture (Architectural Management Track).** The architectural management program is oriented to the administration and practice of architecture and related disciplines. It is offered on KU’s Edwards Campus in Overland Park. Classes in this program are intended to

1. Provide skills and knowledge necessary to become effective participants in the management of a design organization;
2. Provide information about the management of planning, design, and construction projects; and
3. Expose students to management issues facing the design professions.

The curriculum draws on the disciplines of business management, planning, computer science, law, and architecture to expose students to fundamental concepts of management as they relate to the business of architecture. A total of 36 credit hours of course work is required. The curriculum consists of required courses in Financial and Economic Issues, Organizational Issues, Project Delivery, Computer Applications, Law and the Design Professions, Marketing, and Contemporary Issues in Architectural Management. Students may enroll in 9 to 12 hours of graduate credit outside the required courses in the architectural management curriculum. Three to 6 hours in the 36-hour course of study are in the preparation of a written project or thesis, or in additional course work in an area of management to prepare for a final written examination.

**Doctor of Philosophy in Architecture**

The Ph.D. in Architecture educates students to become more valuable to society through academic, business, and government organizations that require greater artistic, scientific, and investigative skills. It offers candidates opportunities to develop and deepen their education in three important ways:

- Enhancing research and analytical skills with rigorous methods of inquiry and synthesis;
- Acquiring advanced knowledge specific to their area(s) of inquiry through comprehensive scholarly investigations and distinguished documentation; and
- Developing the ability to communicate knowledge in a clear and eloquent manner.

To realize this goal, the faculty has made a commitment to create, along with doctoral students, a climate in which scholarship and creativity can flourish. Underlying the advanced study of architecture at KU is an ethic regarding architectural inquiry and architectural practice; one that sustains the question, “What ought we do as architects and researchers to enhance the quality of life on this planet?” Examples of inquiry at KU that exemplify this underlying question are:

- Progressive models of practice embracing evidence-based design and design-build practices;
- Affordable housing with a sensitive aesthetic;
- Material investigations to create more affordable and sustainable building practices;
- Rigorous evaluations of built artifacts to inform better design practice;
- Translation of empirical findings of person-place interaction research into design guidelines; and
- Critical perspectives on human settlement patterns.

Our research is founded on an ethical position. We are not involved in research simply to generate knowledge for its own sake but rather to improve the human condition through more thoughtful built form. The overall focus is on developing understanding that may inform the critical delivery processes by which humane architecture is created.

The Ph.D. in Architecture program is carefully crafted so as to allow students the opportunity to engage in rewarding and potentially revolutionary scholarly investigation steeped in an atmosphere of rigorous academic pursuit. The 49-credit-hour curriculum is divided into three parts: foundation, concentrations, and advanced study. In the foundation, students are required to take the following courses:

- ARCH 930 Doctoral Seminar .......................................................... 1
- ARCH 931 Theories of Architectural Inquiry .................................. 3
- ARCH 951 Methods of Inquiry in Architectural Research .............. 3
- Research Skills ............................................................................. 3
- Advanced Methods ...................................................................... 3
- ARCH 958 Research Practicum Preparation ................................. 3
- ARCH 959 Research Practicum .................................................... 4

Concentrations are major (12 credits minimum) and minor (9 credits minimum) curricula developed by the student in concert
with the major professor. The student becomes a candidate upon passing the comprehensive examination. As a candidate, the student enters the advanced studies portion of the curriculum and begins work on the dissertation. The student must be continuously enrolled, including summer sessions, until all requirements for the degree are completed. There are a minimum of 9 dissertation credit hours required for the degree.

### Architecture Courses

**ARCH 500** Architectural Design VII (6).
**ARCH 501** Architectural Design VIII (6).
**ARCH 502** Accelerated Design I (6).
**ARCH 503** Accelerated Design II (6).
**ARCH 504** Accelerated Design III (6).
**ARCH 505** Study Abroad Studio (6).
**ARCH 510** Problems in Computer Applications (3).
**ARCH 520** Architectural Acoustics (3).
**ARCH 521** Electro-acoustical Systems (3).
**ARCH 524** Structures II (4).
**ARCH 526** Building Power Systems for Architects (1).
**ARCH 527** Building Interior Lighting for Architects (1).
**ARCH 528** Building Acoustical Systems for Architects (1).
**ARCH 529** Environmental Systems I (3).
**ARCH 540** History of Architecture I: Ancient and Medieval Architecture (3).
**ARCH 541** History of Architecture I: Renaissance to Enlightenment (3).
**ARCH 542** History of Architecture III: Modern (3).
**ARCH 552** Ethics and Leadership in Professional Practice (3).
**ARCH 560** Site Planning for Architects (3).
**ARCH 570** Contemporary Issues Seminar I (1).
**ARCH 571** Contemporary Issues Seminar II (1).
**ARCH 572** Contemporary Issues Seminar III (1).
**ARCH 573** Financial and Economic Issues in Architecture Management (3).
**ARCH 574** Organizational Issues in Architecture Management (3).
**ARCH 575** Architecture Management: Managing a CAD System (3).
**ARCH 576** Project Delivery in Architecture Management (3).
**ARCH 577** Marketing Architectural Services (3).
**ARCH 578** Legal Issues in Architectural Management (3).
**ARCH 600** Special Topics in Architecture: ______ (1-3).
**ARCH 601** Introduction to Research Methods (3).
**ARCH 608** Core Studio IV (6).
**ARCH 609** Comprehensive Studio (9).
**ARCH 610** Computers and Project Development (3).
**ARCH 613** Visual Thinking Studio I (3).
**ARCH 614** Freehand Drawing (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 620** Statics for Architects (2).
**ARCH 621** Strength of Materials for Architects (2).
**ARCH 622** Material Investigations (3).
**ARCH 623** Building Practicum (3).
**ARCH 624** Structures II (3).
**ARCH 625** Analysis and Design of Structures for Architects (3).
**ARCH 626** Building Technology I: Construction Systems and Assemblies (3).
**ARCH 627** Building Technology II: Culture of Building Technology (3).
**ARCH 628** Structure in Nature and Architecture (3).
**ARCH 629** Listening to Architecture (3).
**ARCH 630** Theory and Context of Architecture (3).

**ARCH 631** Issues in Contemporary Architecture (3).
**ARCH 632** Contemporary French Architecture (3).
**ARCH 636** Art of Architectural Machines (3).
**ARCH 637** Architecture and Cosmos (3).
**ARCH 638** Architecture, Art, and Science (3).
**ARCH 639** Current/Historical Directions in Architecture (2-3).
**ARCH 640** History of Architecture I: Ancient and Medieval Architecture (3).
**ARCH 641** History of Architecture II: Renaissance to Enlightenment (3).
**ARCH 642** History of Architecture III, Modern (3).
**ARCH 648** Historic Preservation (3).
**ARCH 650** Architect-identified Design-build (1).
**ARCH 651** Advanced Design-build for Architects (2).
**ARCH 652** Architect-client Relations (1).
**ARCH 653** Non-traditional Careers in Architecture (1).
**ARCH 654** Ethics in Architectural Practice (1).
**ARCH 658** Programming and Pre-design Issues (3).
**ARCH 661** Eighteenth to Twentieth-century American Landscape Design (3).
**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 670** Spreadsheet Applications (1).
**ARCH 671** Database Management (1).
**ARCH 672** Project Management Software (1).
**ARCH 673** Presentation Tools (1).
**ARCH 674** Electronic Communication (1).
**ARCH 675** Graphics Packages (1).
**ARCH 676** Facility Management: Tools and Techniques (3).
**ARCH 677** Construction Cost Estimating for Architects (1).
**ARCH 678** Construction Project Management for Architects (1).
**ARCH 680** Building with Intelligence (3).
**ARCH 681** Defining Community (3).
**ARCH 690** Architecture Study Abroad (6).
**ARCH 691** Architecture Practicum (6).
**ARCH 692** Documentation (3).
**ARCH 693** Workplaces (3).
**ARCH 694** Homelaces (3).
**ARCH 697** The Making of Place in an Aging Society (3).
**ARCH 700** Directed Readings in Architecture: ______ (1-3). Individual study of special topics and problems. May be 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 judgments about matters of quality and quantity on architectural issues. Students will be expected to formulate sensible systems of classification for their chosen material. Students will be expected to produce papers and essays, make sample grant applications, and thesis formulations. LEC

**ARCH 703** Graduate Design Studio III (6). A continuation of ARCH 604 with an increased emphasis on design problems of increasing scale and complexity. Graduate level course that complements the core syllabus of ARCH 400 with weekly seminars, expanded reading lists, and additional classroom assignments. Prerequisite: ARCH 604 (see studio 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

The post-professional M.A. in architecture offers a research-based academic program on the Lawrence campus and an architectural management program on the KU Edwards Campus.

ARCH 720 Architectural Acoustics (3). An introduction to the physics of sound. Objective and subjective evaluation and control of sound as applied to architectural spaces. Room shaping, mechanical and electrical system noise and vibration control, and electro-acoustic sound reinforcement. Prerequisite: PHSX 114 and ARCH 626 or equivalent, or consent of instructor. LEC

ARCH 721 Electro-acoustical Systems (3). A study of electro-acoustic sound reinforcement and reproduction systems for buildings. Prerequisite: PHSX 212, or consent of instructor. 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, bisociation, and triadization will link rigorous research to methods of application. LEC

ARCH 754 Design Ethics (3). This seminar will explore both Western and Eastern concepts of ethics and morality through readings, papers, discussion, and guest speakers. The role of ethics in providing guidelines for social and societal responsibility in design will be developed. LEC

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

ARCH 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 designs. 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 770 Contemporary Issues Seminar I (1). A seminar on contemporary issues facing the profession. LEC

ARCH 771 Contemporary Issues Seminar II (1). These seminars will consist of three to four guest lecturers each semester. All students enrolled in this course will attend the same lecture as ARCH 772. Topics will be selected to reflect major issues covered in the course work, or contemporary issues facing the profession. LEC

ARCH 772 Contemporary Issues Seminar III (1). These seminars will consist of three to four guest lecturers each semester. All students enrolled in this course will attend the same lecture with ARCH 771. Topics will be selected to reflect major issues covered in the course work, or contemporary issues facing the profession. This course will be graded Satisfactory/Unsatisfactory. LEC

ARCH 773 Financial and Economic Issues in Architecture Management (3). This course will focus on the fundamentals of accounting, macroeconomics and the construction industry, and concepts related to the development and implementation of a strategic business plan. LEC

ARCH 775 Architecture Management: Managing a CAD System (3). This course covers the various procedures involved in managing a CAD system within a design organization. It also explores the different applications and uses of current CAD technology. Topics to be addressed include: selecting a system; billing CAD services; support services and personnel; marketing CAD; customization, file management, menus and script files; AutoLISP Programming; and integrating CAD with other programs. Prerequisite: An introductory CAD class or permission of the instructor. LEC

ARCH 776 Project Delivery in Architecture Management (3). Conventional methods for project delivery will be reviewed along with design/build, fast-track, and other techniques. The relationship of the architect and development will also be explored, as will the relationship of project development to urban design concepts. LEC

ARCH 777 Marketing Architectural Services (3). The emphasis of this course will be on the development and implementation of a marketing plan, techniques related to the marketing of specific projects, and the relationship of marketing to other components of a firm. LEC

ARCH 778 Legal Issues in Architecture Management (3). A course designed to familiarize the student with legal considerations related to professional practice. Case studies and selected readings will serve as the basis for discussion of regulations, 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: Architecture Management (1-3). Organized field visits and study of selected architectural and urban sites abroad. Pre- and post-travel readings, with permission 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 799 Independent Study (1-3). May be repeated for credit up to a total of nine (9) credits. Prerequisite: Graduate standing and consent of instructor. IND

ARCH 800 Special Topics in Architecture: Architecture Management (1-3). Advanced or experimental courses on specialized topics representing unique or changing needs and resources in the graduate program in architecture. LEC

ARCH 801 Urban and Community Issues I (3). A workshop-based course involving approved self and group directed investigations into issues of urban and community design with a focus on problem-setting, discovery and analysis. Prerequisite: Successful completion of ARCH 609 and consent of the Architecture Program Chair. LAB

ARCH 802 Urban and Community Issues II (6). Continuation of the critical and rigorous investigations into issues of urban and community design with an increasing focus on synthesis and evaluation. Prerequisite: ARCH 801. LAB

ARCH 803 Design-build and Materiality I (3). A workshop-based course involving approved self and group directed investigations into issues of design-build and/or materiality with a focus on problem-setting, discovery and analysis. Graded on a satisfactory/unsatisfactory basis. Prerequisite: Successful completion of ARCH 609 or ARCH 704 and consent of the Architecture Program Chair. LAB

ARCH 804 Design-build and Materiality II (6). Continuation of the critical and rigorous investigations into issues of design-build and/or materiality with an increasing focus on synthesis and evaluation. Prerequisite: ARCH 803. LAB

ARCH 805 Architectural Technology I (3). A workshop-based course involving approved self and group directed investigations into issues of building technology with a focus on problem-setting, discovery and analysis. Graded on a satisfactory/unsatisfactory basis. Prerequisite: Successful completion of ARCH 609 and consent of the Architecture Program Chair. LAB

ARCH 806 Architectural Technology II (6). Continuation of the critical and rigorous investigations into issues of building technology with an increasing focus on synthesis and evaluation. Prerequisite: ARCH 805. LAB

ARCH 807 Healthy and Sustainable Environments I (3). A workshop-based course involving approved self and group directed investigations into issues of sustainable environments with a focus on problem-setting, discovery and analysis. Graded on a satisfactory/unsatisfactory basis. Prerequisite: Successful completion of ARCH 609 and consent of the Architecture Program Chair. LAB

ARCH 808 Healthy and Sustainable Environments II (6). Continuation of the critical and rigorous investigations into healthy and sustainable environments with an increasing focus on synthesis and evaluation. Prerequisite: ARCH 807. LAB

ARCH 809 Building Typology I (6). A workshop-based course involving approved self and group directed investigations into a particular building type with a focus on problem-setting, discovery and analysis. Prerequisite: Successful completion of ARCH 609 and consent of the Architecture Program Chair. LAB

ARCH 810 Building Typology II (6). Continuation of the critical and rigorous investigations into a particular building type with an increasing focus on synthesis and evaluation. Prerequisite: ARCH 809. LEC

ARCH 811 Architectural Investigation I (6). A workshop-based course involving approved self and group directed investigations in a particular area of architectural investigation with a focus on problem-setting, discovery and analysis. Prerequisite: Successful completion of ARCH 609 and consent of the Architecture Program Chair. LAB

ARCH 812 Architectural Investigation II (6). Continuation of the critical and rigorous investigations in a particular area of architectural investigation with an increasing focus on synthesis and evaluation. Prerequisite: ARCH 811. LAB

ARCH 850 Special Topics in Management/Practice: (1-3). Advanced or experimental courses on specialized topics representing unique or changing needs and resources in the management/practice option. IND

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

ARCH 899 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 Oral Examination Option may be substituted. Prerequisite: Permission of the Architecture Program Chair. THE
ARCH 930 Doctoral Seminar (1). The purpose of this discussion-based seminar is to explore issues of architectural research from a variety of perspectives. May be repeated up to a maximum of two (2) credits. Prerequisite: Admission to the Ph.D. in Architecture Program or consent of the Architecture Program Chair. LEC
ARCH 931 Theories of Architectural Inquiry (3). This course will introduce the doctoral student to the major historical and theoretical foundations of architectural research. Architectural inquiry will be defined from diverse and distinct perspectives and it will be assumed that buildings should be viewed as physical and cultural artifacts, as elements within larger social, natural and urban contexts, and as products of design and fabrication processes. The course will be a seminar format in which students will contribute to the discussions through independent research and critical analyses of the assigned readings and lectures. Prerequisite: Admission to the Ph.D. in Architecture Program or consent of the Architecture Program Chair. LEC
ARCH 951 Methods of Inquiry in Architectural Research (3). This course will provide students a foundation in methods of inquiry in researching the built environment. The purpose is to train students in developing research strategies applicable to the areas of design-fabrication processes, dwelling and community, and health and sustainability. Students will be exposed to a variety of methods of inquiry drawn from a number of disciplines. Through critical reading and content analysis, students will consider the value of scholarly research, learn to develop research questions, understand the nature of evidence, and the writing, presentation and illustration of scholarship. The course will be a seminar format in which students will contribute to the discussions through independent research and critical analyses of the assigned readings and lectures. Prerequisite: Admission to the Ph.D. in Architecture Program or consent of the Architecture Program Chair. LEC
ARCH 958 Research Practicum Preparation (1). In this course, the students will frame a research question and develop a research proposal. The course is intended to serve as preparation for ARCH 998. Prerequisite: ARCH 931 and ARCH 951. RSH
ARCH 959 Research Practicum (4). This is a research project undertaken and completed under the supervision of the student’s major professor. The student designs, executes, and completes a small scale research project and produces a document of publishable quality within his/her area of inquiry. The project is intended to serve as a pilot study leading towards the dissertation. Prerequisite: ARCH 958. RSH
ARCH 999 Doctoral Dissertation (1-9). Individual research work. A minimum of nine credits is required for the degree. May be repeated for credit. Prerequisite: Successful completion of the Comprehensive Oral Examination. THE

Architectural Engineering

Architectural engineering at KU is administered by the School of Engineering. For program requirements and course descriptions, see Civil, Environmental, and Architectural Engineering in the School of Engineering chapter of this catalog or online at www.ccae.engr.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.

Architectural engineering students who wish to complete an accredited Master of Architecture degree in addition to the B.S. in architectural engineering should apply for admission to the school’s three-and-one-half-year M.Arch. program by February 1 of the final year in architectural engineering. The application includes the completed application form and appropriate fee, a statement of purpose, and a portfolio of work. Assuming good performance in previous design studios, students are likely to receive advanced placement into the M.Arch. curriculum (normally into the second year of study).

Urban Planning

Chair: James M. Mayo, ubpl@ku.edu
Marvin Hall, 1465 Jayhawk Blvd., Room 317
Lawrence, KS 66045-7614, www.sauv.ku.edu, (785) 864-4184
Professor: Mayo
Professor Emeritus: Black
Associate Professors: Luckey, McClure, White
Assistant Professors: Johnson, Serda

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 environmental planning, housing and development planning, land use planning and urban design, and transportation planning concentrations.

Admission

Persons whose previous records indicate ability to succeed with advanced work may be admitted to graduate studies through the 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 student’s academic background is reviewed before an applicant without a bachelor’s degree is admitted as a degree-seeking student at KU. Admission decisions are based on the information supplied in the application materials.

A complete application consists of:
1. A completed application form;
2. A statement of the applicant’s career goals and substantive interests in urban planning and rationale for undertaking graduate study in urban planning at KU;
3. One copy of official transcripts from all colleges or universities attended;
4. Three reference forms or letters of recommendation from persons qualified to comment on the applicant’s academic abilities and probable success in graduate study;
5. Scores from Graduate Record Examinations;
6. Test of English as a Foreign Language scores, if the student’s native language is not English; and
7. Application fee: nonrefundable check or money order payable to the University of Kansas (see Admissions in the General Information chapter of this catalog).

Application deadlines are July 1 for fall, December 1 for spring, and May 1 for summer admission. Candidates are urged to submit applications as early as possible. It may take several weeks to obtain all the materials required for an application file. International applicants must apply by June 1 for fall, November 1 for spring, and April 1 for summer admission.

Applications for financial aid generally are considered early in the spring. In some cases, there is a February 1 application.
Urban Planning

deadline. Students seeking scholarship funding must submit their scores from the Graduate Record Examination. Submit your application online at www.graduate.ku.edu/GAPC. Send original transcripts of all completed college and university course work to

The University of Kansas
Graduate Application Processing Center
Strong Hall, 1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

Send all other requested application materials to

The University of Kansas
Urban Planning Program
Marvin Hall, 1465 Jayhawk Blvd., Room 317
Lawrence, KS 66045-7614

Baccalaureate Preparation
A good undergraduate education in almost any discipline is acceptable preparation. Undergraduate preparation in the social sciences, engineering, business, or architecture is closely related to the direction and content of the M.U.P. program at KU.

M.U.P. Degree Program and Requirements
All students must complete 48 credit hours, which normally involves four semesters of full-time study. The required courses are

General (6 credit hours)
UBPL 736 Planning Institutions .................................................. 3
UBPL 763 Professional Practice .................................................. 3

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

Theory (6 credit hours)
UBPL 815 History and Theory of the Planning Process ................ 3
UBPL 850 Urban and Regional Theory ....................................... 3

Concentrations. The curriculum requires each student to specialize in one of the following substantive areas: environmental planning, housing and development planning, land use planning and urban design, and transportation planning. The student should declare the major area by the second semester of the course of study. In each concentration, the student must complete a course in theory and policy, methods, and implementation. The minimum number of credit hours for the major area depends on whether the student pursues the thesis or the nonthesis option. For the thesis option, the student takes at least 9 hours in the major area. For the nonthesis option, the student takes at least 12 hours in the major area.

The specialty courses are as follows:

Environmental Planning
Theory and Policy
UBPL 765 Principles of Environmental Planning ......................... 3
Methods
UBPL 738 Environmental Planning Techniques .......................... 3
Implementation
UBPL 777 Environmental Planning Implementation ...................... 3
Supplementary Courses
UBPL 730 Introduction to Land Use Planning ............................. 3
UBPL 735 Site Planning ......................................................... 3
UBPL 802 Special Topics: Policy and Methods in Environmental Planning 3
POL 562/4 EVRN 620 Environmental Politics and Policy .............. 3
ARCH 600 Special Topics in Architecture: Sustainability in Context .... 3

Housing and Development Planning
Theory and Policy
UBPL 710 Introduction to Housing Policy .................................... 3
UBPL 715 “Community” in Neighborhood Planning and Design ........ 3
Methods
UBPL 764 Real Estate Development I ......................................... 3
Implementation
UBPL 714 Local Economic Development Planning ....................... 3
UBPL 716 Community and Neighborhood Revitalization .............. 3
Supplementary Courses
UBPL 760 Historic Preservation Planning .................................. 3
UBPL 768 Real Estate Development II ........................................ 3
UBPL 802 Special Topics: Historic Preservation Economics ...........(3)

Land Use Planning and Urban Design
Theory and Policy
UBPL 730 Introduction to Land Use Planning .............................. 3
Methods
UBPL 735 Site Planning ......................................................... 3
UBPL 764 Real Estate Development I ......................................... 3
Implementation
UBPL 766 Urban Design Implementation .................................... 3
Supplementary Courses
UBPL 662 Twentieth-century American Landscape ....................... 3
UBPL 739 Issues in Growth Management .................................... 3
UBPL 760 Historic Preservation Planning .................................... 3

Transportation Planning
Theory and Policy
UBPL 758 Urban Mass Transportation ...................................... 3
Methods
UBPL 750 Introduction to Transportation Planning ....................... 3
Implementation
UBPL 756 Advanced Seminar in Urban Transportation Planning ...... 3
Supplementary Courses
CE 781 Traffic Engineering I .................................................. 3
CE 881 Traffic Engineering II .................................................. 3

Free Electives. Besides the specialty courses, thesis students must take 3 additional credit hours, and nonthesis students must take 9 additional credit hours of elective courses, either in or outside the 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 adviser, 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 tests the student’s competence as a generalist/specialist planner. The examination includes five questions: one question each on Planning Theory, Urban and Regional Theory, and Planning Methods, and two questions in the student’s concentration. No academic credit is given for the examination.

Urban Planning Courses
UBPL 502 Special Topics in Urban Planning: (1-6).
UBPL 522 History of the American City I (3).
UBPL 538 Environmental Planning Techniques (3).
UBPL 565 Principles of Environmental Planning (3).
UBPL 662 Twentieth-century American Landscape (3).
UBPL 701 Directed Readings (1-6). Designed to meet the needs of students whose study in urban planning cannot be met with the present courses. Prerequisite: Consent of instructor, RSH.
UBPL 705 Economic Analysis for Planners (3). An introduction to the concepts and analytical techniques of economics that are most relevant to urban planners. The first part of the course is devoted to microeconomic theory, welfare economics, and the role of the government in the economy. The remainder covers public finance, investment analysis, and methods of determining the allocation of public resources (such as benefit-cost analysis). LEC.
UBPL 710 Introduction to Housing Policy (3). Designed to provide an introduction to the various methods used by the public sector in order to intervene in the housing market. Many different programs are used by governments at all levels to achieve many different housing goals. This course will examine many of these programs in an effort to understand what they are supposed to accomplish and how well they work. In all cases, the objective of the course is to train planners so that they have a firm understanding of housing programs that exist now as well as a grasp of the methods used to select housing strategies for implementation by the public sector. LEC.
UBPL 714 Local Economic Development Planning (3). This course provides a broad overview of local economic development planning. Emphasis is on the role of the practitioner and the various activities that can be pursued to encourage and enhance the economic base of a locality. The objectives of the course are to answer
the questions: who-are-economic-development-planners; what backgrounds and interests do they have; what types of activities do they perform and initiate to en-
courage and enhance economic development; and how do they decide upon which activities to pursue? LEC

UBPL 715 "Community" in Neighborhood Planning and Design (3). This course provides an in-depth study of the public process for understanding and initiating de-
novation opportunities of community to local neighborhood planning. The course explores social theories of community and how these have influenced prescriptive models for neighborhood development and design. The course also evaluates the interplay of social, environ-
mental, and economic forces at the neighborhood level and their relationship to community development and well-being. LEC

UBPL 716 Community and Neighborhood Revitalization (3). The focus of this course is on the social, physical and economic renewal of urban neighborhoods through the collaborative development and implementation of community and neighborhood revitalization plans. The course will also assess the means by which local government can best support community-based initiatives to redevelop urban neighborhoods. Students in the course will develop substantive knowledge of community and neighborhood revitalization techniques as well as applied knowledge on how to engage with a community client and develop a neighbor-
hood revitalization plan. Prerequisite: UBPL 715 or permission of instructor. LEC

UBPL 722 History of the American City II (3). This course examines the evolution of American cities from their European antecedents through the late 20th century, from the urban planning perspective. It focuses on the changing spatial forms and functions of American cities and how these changes relate to socioeconomic and political aspects of urbanization as well as changes in technology. Emphasis is placed on analyzing the relationships between historical development patterns and the current range of problems facing most U. S. cities. (Same as UBPL 522 but gives graduate credit.) LEC

UBPL 733 Introduction to Land Use Planning (3). Introduction to Land Use Plan-
nning is a policy course focusing on the principles, context, and underlying as-
sumptions of urban land use planning. It will introduce students to the planning process, what makes great plans, and the major implementation tools for planning (zoning, capital improvement plans, engineering standards, and subdivision regu-
lations). Students will complete a case study of a real life planning process and create a plan for an outlying area of a growing city. LEC

UBPL 735 Site Planning (3). Site Planning is an essential component of the land development process. This course provides students with an understanding of both site analysis and site design. The site analysis component examines all of the physical, biological, and cultural features that affect land development. The site design component explores principles and techniques for the design of single-family housing, multi-family housing, shopping areas, workplaces, and mixed-use centers, with a focus on how these elements can be fused together to create high-quality neighborhoods, districts, and cities. The course also covers the site plan review process in which proposed projects are evaluated for their compliance with plans and regulations. LEC

UBPL 736 Planning Institutions (3). This course explores the legal principles un-
derlying the institutions, practices and processes of city planning. Subjects to be dis-
cussed include zoning, eminent domain, subdivision regulation, transfer of de-
velopment rights, environmental regulation, growth management, and other plan-
ning mechanisms used to guide urban growth and control the use of land. Stud-
ents should emerge from the course with a solid understanding of both the logic and politics of planning in a socioeconomic institutional context. LEC

UBPL 738 Environmental Planning Techniques (3). The course covers a variety of topics within environmental planning. Each topic is examined with respect to the scope of the issues, the methods of analyzing and/or measuring these issues, and the ways planners address these issues in order to avoid or mitigate environ-
mental problems. LEC

UBPL 739 Issues in Growth Management (3). This course examines all aspects of growth management including its history, evolution, legal foundations, and applica-
tion at the national, state, regional, and local level. It covers both theoretical issues and specific techniques such as adequate public facilities standards, impact fees, and urban growth boundaries. Impacts on affordable housing, economic develop-
ment, social equity, and environmental conservation will also be discussed. LEC

UBPL 741 Quantitative Methods I (3). Introduction to quantitative techniques uti-
lized in planning analysis. Introduction to interential statistics, computer pro-
gramming, and the use of statistical packages. LEC

UBPL 742 Quantitative Methods II (3). Advanced study in planning techniques in the areas of population forecasting, analysis of variance, and regression. The course requires extensive use of microcomputers. Prerequisite: UBPL 741 or consent of instructor. LEC

UBPL 746 GIS Applications for Design and Planning (3). This course will explore a range of Geographic Information Systems (GIS) applications for students in ar-
chitecture and planning. It will be structured as a workshop, starting with a re-
view of basic GIS concepts and procedures. Different digital data sources will be explored, along with their importing (import and export) capabilities. The focus will be on applications at different scales using projects in architecture, site planning, environmental planning, urban analysis, and regional analysis. Three dimensional analysis will also be introduced. Each student will develop a final project as a syn-
thesis of earlier exercises and as an application relevant to their individual profes-
sional interests. LEC

UBPL 750 Introduction to Transportation Planning (3). This course is a survey course covering multiple modes of transportation (planes, trains, buses, automo-
tives, bicycles, and walking). The field of transportation planning is examined within a policy analysis framework. Knowing the policy context and understand-
ing how decisions are made will assist transportation planners in understanding the world in which they operate. In addition to the policy context, this course will focus on the technical knowledge transportation planners are expected to know like federal requirements, traffic modeling, and specific topics like bicycle and pedestrian planning and traffic calming. LEC

UBPL 756 Advanced Seminar in Urban Planning Implementation (3). The course is divided into two parts. The first part covers the theoretical aspects of travel de-
demand forecasting. The course will cover the processes of creating and using a travel model. The second part of the class involves using TransCAD software to develop and use a travel demand model for a small city. Students obtain working knowl-
edge of certain microcomputer packages and software 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 transporta-
tion 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 tech-
nologies, operations, ridership characteristics, impacts on urban development, and economic, 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 preser-
vation at the state and local level, preservation at the private level, ordinance cre-
ation, legal aspects of preservation, technical issues and contemporary issues and controversies in the field of preservation. Projects will deal with philosophecal and contemporary issues in preservation. LEC

UBPL 763 Professional Practice (3). This course seeks to provide students with both skills and evaluative frameworks to enhance their work as practicing plann-
ers. We will focus specifically on issues related to ethics, citizen participation, dispute resolution, and management. Considerable attention will be paid to "real life" lessons. Prerequisite: UBPL 741 and UBPL 815. LEC

UBPL 764 Real Estate Development I (3). This course is designed to provide a working knowledge of the mechanics of real estate investment analysis. As a plan-
ning 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 develop-
ment; the various forms of property ownership; and the implications of tax laws upon the rehabilitation of historic properties and the provision of low-income hous-
ing. LEC

UBPL 765 Principles of Environmental Planning (3). This course introduces stu-
dents to the issues that planners and decision makers face as they strive to protect environmental resources, especially within the context of land use planning. Em-
phasis will be placed on the theoretical and policy considerations that guide the work of environmental planners. LEC

UBPL 766 Urban Design Implementation (3). Urban design is studied from the perspective of planning controls. Issues include: aesthetics and zoning, sign regu-
lation, 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 de-
velopment process. Advanced study of various public sector programs to guide and direct the real estate development process will be undertaken, including the use of tax credits for affordable housing and for historic preservation. Projects developed within the region will be examined to illustrate the application of these techniques. Prerequi-
site: Successful completion of UBPL 764 or permission of instructor. LEC

UBPL 773 Environmental Planning Implementation (3). This course emphasizes the details of successful implementation of environmental plans. While the particu-
lar focus (land, water, energy, etc.) may vary, the techniques and processes stud-
Urban Planning • Joint Degree Programs

ied will be broadly applicable. Students will develop environmental plans using real-world data. Prerequisite: UBPL 765, UBPL 738, or consent of instructor. LEC

UBPL 802 Special Topics: ______ (1-6). This course is intended to afford the opportunity for individual or group projects/research in an urban planning topic. RSF

UBPL 806 Thesis—Graduate Research (1-6). Independent study and research related to the master’s thesis. Prerequisite: Consent of instructor. THE

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 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 explores the forces that shape the structure and function of cities and regions, drawing upon insights from planning, geography, economics, sociology, demography, and political science. Special attention is paid to theories that can be applied by urban planners to improve the economic performance, quality of life, and social equity of urban areas. Topics covered include the origin and development of cities, agglomeration economies, location theory, central place, mix-and-share analysis, economic base, input-output, labor markets, urban models, regional development planning, globalization, high technology, urban poverty, and problems of regional governance. Prerequisite: UBPL 741 and UBPL 815. LEC

Joint Degree Programs

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-and-one-half-year M.Arch. degree, both offered through the School of Architecture and Urban Planning. The program is intended for students interested in careers in urban design. A total of 133 credit hours is required, comprising 39 hours in urban planning and 94 hours in architecture. Applicants must meet admission requirements of both the School of Architecture and Urban Planning 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 Planning and the normal one-year M.A. degree in American studies offered through the College of Liberal Arts and Sciences. The program is designed for students interested in careers in policy planning and research involving GIS cartography, environmental planning, and land use planning.

For further information on the combined program, consult the respective program chairs.

See also Geography in the College of Liberal Arts and Sciences chapter of this catalog.

M.U.P. and M.P.A.

This joint degree combines in a three-year program the M.U.P. degree offered in the School of Architecture and Urban Planning 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 Public Administration in the College of Liberal Arts and Sciences chapter of this catalog.

M.U.P. and J.D.

The joint J.D./M.U.P. program is open to those who have earned baccalaureate degrees and whose undergraduate records indicate that they have the capacity to complete the law and urban planning programs. Applicants 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.
## School of Business

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See pages 12-14 for admission procedures.

Application fees for all business students: paper $65, online $60.
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 Pearson VUE, www.vue.com. 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.Acc. programs must include (1) Graduate application form, (2) three essays, (3) one official transcript of each college and university record, (4) two letters of recommendation form 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 rules and regulations. See Admission in the General Information chapter of this catalog for more information.

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. A concentration in finance is offered.

The Master of Accounting program offers a one-year degree for students with baccalaureate degrees in business or accounting equivalent to that required for accreditation by the AASCB.
Deficiencies in the undergraduate program result in additional hours being required for the degree.

The Ph.D. program in business requires no specific college work in business administration.

**Student Services**

**Advising**
The Graduate Advising Center in 206 Summerfield Hall coordinates advising for graduate students. The directors and their assistants are available to give advice about program requirements, course prerequisites, and program planning. A graduate faculty adviser is available to help the student develop the most effective program for attaining her or his educational and career goals.

**Library Resources**
The Anschutz Library offers a closed reserve service and reference services including a small print collection. The large collection in Watson Library offers additional reference and research materials. The Business/Economics Bibliographer in the reference department can help business students use the library system. Spencer Research Library has an excellent collection on the history of economic thought and a special collection of business papers and records.

**Wagon Computer Laboratory**
The Wagon 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.

**Harper Computing Classroom**
Equipped with 34 PCs, the Harper room is intended for teaching classes that make heavy use of computers.

**Employment Opportunities and the Business Career Services Center**
The school maintains a career services center in Summerfield Hall. The faculty and career services staff are committed to providing a strong student-oriented program to help students develop career objectives and target job opportunities. The BCSC cannot guarantee jobs, but it will make every effort to bring together the job-seeking candidate and potential employers in accordance with their needs, abilities, and interests. Business graduates have been successful in finding employment in their areas of interest. Positions have been available nationwide, regardless of academic area or undergraduate degree.

Students are encouraged to register with the BCSC as early as possible. As the job market tightens, employer recruiting increases. An early start can mean wider access to potential employment opportunities. Registrants’ résumés are placed on a Web-based computer database, allowing access by the BCSC, employers, and students. This allows the BCSC to perform résumé referrals quickly and companies to conduct their own résumé searches. Students can update their résumés at any time from any Internet-linked computer.

Additional services include Web job listings, career counseling, résumé consultation, a company library, and links on our home page, as well as extensive career development and job search resources.

Statistics on graduates are collected each semester. Information on the number of degrees granted, percentage of graduates employed, and average starting salaries can be found online at [www.business.ku.edu](http://www.business.ku.edu).

**Master of Business Administration**
The Master of Business Administration degree program meets the educational needs of persons seeking positions with managerial responsibilities in both the public and the private sectors. KU’s program emphasizes broad concepts of business administration but provides an option for concentration in a specific area of business management.

KU offers the M.B.A. program for in-residence (full-time) students, who take most of their coursework on the Lawrence campus, and for working professional students, who take course work in the evenings on the KU Edwards Campus in Overland Park. The two versions of the program are tailored to meet the differing needs of students. In-residence students typically are committed to a career change. The evening professional students generally seek to enhance their career paths while remaining employed. Although the two versions of the program have some differences in the way that a student progresses, the philosophy, course content, and faculty are the same for both.

**M.B.A. Admission Requirements**

1. Baccalaureate degree from an accredited college or university or the equivalent. No specific course work in business administration is required.
2. Two years of work experience are preferred.
3. Proficiency in mathematics at the college algebra level.
4. Selection is based on high promise of success in graduate study in business administration, as indicated by a combination of
   (a) Prior academic performance;
   (b) Scores on Graduate Management Admission Test;
   (c) Scores on Test of English as a Foreign Language, if appropriate;
   (d) Prior work experience;
   (e) Two letters of recommendation from employers or faculty members;
   (f) A current résumé.
5. A $60 nonrefundable application fee for online applications or a $65 nonrefundable application fee for applications on paper, payable to the University of Kansas, must accompany all applications.

Submit your application online at [www_graduate.ku.edu/GAPC](http://www_graduate.ku.edu/GAPC). Send original transcripts of all completed college and university course work to

The University of Kansas
Graduate Application Processing Center
Strong Hall, 1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

Send all other requested application materials to

The University of Kansas School of Business
Master’s Applications
1300 Sunnyside Ave.
Lawrence, KS 66045-7585

**In-residence M.B.A. Degree Program**
The in-residence M.B.A. program features an emphasis on team-building that begins with M.B.A. Jump-Start and is integrated throughout the program. The degree requires a minimum of 52 graduate credit hours. Courses are sequenced to be completed on a full-time basis in three to four semesters. The specific requirements are designed for a person holding a baccalaureate degree in any field, with no specific course requirements in business and related areas.

**Degree Requirements.** A minimum of 52 credit hours, satisfying the following:

**Business Course Requirements:**

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Master of Business Administration • Master of Accounting

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| MGMT 705 Managing in a Global Environment | ............................................. 1 |
| MGMT 706 Professional Development Skills I | ............................................. 1 |
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| MGMT 807 Ethical Decision Making in Business | ............................................. 2 |
| MKTG 701 Marketing Management | ............................................. 2 |
| MGMT 704 Strategic Management | ............................................. 2 |

**Environmental Courses** (2 credit hours). Choose one of two courses: BE 702 Global Economic Environment of Business (2) or BLAW 701 Introduction to the Legal Environment of Business (2) ....... 2

| Breadth Courses (6 credit hours). Choose three of four courses: ACCT 702 Managerial Accounting (2) | DSCI 701 Statistical Decision Making (2) | IST 701 Managerial Information Systems (2) | MGMT 702 Human Resources Management (2) | ............................................. 6 |

| Advanced Business Elective Courses (25 hours) | | | | |

**Designation of a Concentration:**

1. A concentration is optional. Concentrations available are finance, human resources management, information technology, international business, management, and marketing.

2. A concentration consists of electives, selected from a list of designated courses in the concentration, totalling 8 or 9 credit hours for a minor concentration and 11 or 12 hours for a major concentration in most areas.

3. The intent to pursue a concentration usually is declared in writing before completion of enrollment for the last semester in the program. The area adviser must approve the concentration plan and any subsequent changes in that plan.

4. A graduate course related to the study of business administration offered by another division of the university may be substituted for a specific concentration course requirement with the approval of the area adviser and the director of master’s programs.

**Evening Professional M.B.A. Degree Program**

The KU Edwards Campus, 12600 Quivira Rd., Overland Park, KS 66213-2402, serves students in the Kansas City area. The program for working professionals requires the same curriculum as the in-residence program. The same faculty members teach the courses, and the concentration options described above are available for evening students. Edwards Campus courses are offered evenings Monday through Thursday (one session per class per week) and occasionally on Saturday mornings. Each required course is offered once a semester, and elective courses from each functional area normally are offered each semester. In the summer, some core and elective courses are offered.

For admission information, see M.B.A. Admission Requirements.

**Degree Requirements.** A total of 48 hours is required, consisting of 25 core and 23 elective hours.

**Foundation Courses: Required of All Students (17 credit hours)**

- ACCT 701 Financial Accounting ............................................. 2
- BE 701 Managerial Economics ............................................. 2
- DSCI 701 Statistical Decision Making...................................... 2
- FIN 701 Financial Management ............................................. 2
- MGMT 701 Organizational Behavior ...................................... 2
- MGMT 705 Managing in a Global Environment ................. 1
- MGMT 807 Ethical Decision Making in Business ......... 2
- MKTG 701 Marketing Management ..................................... 2
- MGMT 704 Strategic Management ...................................... 2

**Environmental Courses** (2 credit hours). Choose one of two courses: BE 702 Global Economic Environment of Business (2) or BLAW 701 Introduction to the Legal Environment of Business (2) ....... 2

**Breadth Courses** (6 credit hours). Choose three of four courses:

- ACCT 702 Managerial Accounting (2)
- DSCI 702 Operations Management (2)
- IST 701 Managerial Information Systems (2)
- MGMT 702 Human Resources Management (2) ....... 6

**Master of Accounting**

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

- Financial Reporting and Assurance
- Tax
- Information Systems

To receive a well-rounded business education, students take electives in other business areas such as business law, marketing, finance, and organizational behavior. In addition, the program gives students the opportunity to improve writing, oral presentation, and interpersonal skills needed for a successful career in accounting and information systems.

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**The University of Kansas**
Graduate Application Processing Center
Strong Hall, 1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

Send all other requested application materials to:

**The University of Kansas School of Business**
Master’s Applications
1300 Sunnyside Ave.
Lawrence, KS 66045-7585

**Degree Requirements**

1. Candidates for the M.Acc. degree who have undergraduate degrees in accounting from KU or other schools with equivalent undergraduate accounting programs must complete at least 30 semester credit hours of course work. 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 the master’s degree, for a total of 42 hours.

3. Candidates without undergraduate degrees in business must complete 15 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 64 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.Acc. program. Admission is contingent on completing these courses.

**M.Acc. Requirements.** Required for students with undergraduate accounting or business degrees:

**Concentration.** Students must choose a concentration from one of the following areas: ............................................. 12-13

**Financial Reporting and Assurance (choose any four)**

- ACCT 725 Advanced Managerial Accounting: Quantitative and Economic Topics (3)
- ACCT 722 Current Issues in Financial Reporting (3)
- ACCT 721 Advanced Accounting Problems (3)
- ACCT 741 Fraud Examination and Forensic Accounting (3)
- ACCT 742 Advanced Auditing (3)
- ACCT 743 Evaluating Internal Controls in Computerized Accounting Systems (3)

**Tax**

- ACCT 545 Advanced Taxation (3)
- ACCT 731 Tax Research (3)
- ACCT 732 Taxation for Business Entities (4)
- ACCT 733 Tax Planning (3)

*The tax concentration requires 13 hours. One less hour of business or accounting elective credit is required. The total remains 30 hours.*
Master of Accounting • Master of Science with a Major in Business • Combined M.B.A./J.D.

Information Systems (four courses)
Track core:
IST 704 Database Management (3)
IST 706 Systems Analysis and Design (3)
And two of the following:
IST 702 Systems Development (3)
IST 708 Strategic Information Systems Planning (3)
IST 709 Business Computer Networking (3)
IST 712 Information Security (3)
IST 715 E-commerce: An Integrative Perspective (2)
IST 720 Developments in Software Technology (3)
IST 730 IT Project Management (3)
MGMT 725 Management of Technology I: Technology and Strategy (2)
MGMT 726 Management of Technology II: Technology and Operations (2)
MGMT 750 Special Topics in Management: Global Project Management (2)

Total credit hours required for students with undergraduate business degrees ........................................... 56

Total credit hours required for students with undergraduate accounting degrees ........................................... 30

Accounting Undergraduate Prerequisites (26 credit hours)
ACCT 200 Financial Accounting I (prebusiness) ........................................... 4
ACCT 201 Managerial Accounting I (prebusiness) ........................................... 3
ACCT 320/BUS 510 Financial Accounting II ........................................... 3
ACCT 325/BUS 517 Managerial Accounting II ........................................... 3
ACCT 303 Introduction to the Accounting Profession ........................................... 1
IST 311/BUS 605 Information Systems for Accountants ........................................... 3
ACCT 330/BUS 609 Income Tax Accounting ........................................... 3
ACCT 410/BUS 610 Financial Accounting III ........................................... 3
ACCT 543 Introduction to Auditing ........................................... 3

Total credit hours in undergraduate accounting courses ........................................... 26

Finance Concentration. For information, contact the director of master’s programs, School of Business.

Combined M.B.A. and J.D.
This program combines in four years of study the three-year J.D. program offered by the School of Law and the two-year M.B.A. program offered by the School of Business. It is for students who plan to engage in corporate law practice or enter business using law training as background. It offers training in the convergent fields of business management and law.

Admission 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 Admission Test are required. A student who decides to enter the program after beginning the first year in the School of Law or in the M.B.A. program should discuss the plan with the associate dean or program director of each school as early as possible. No student may 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 40 credit hours of graduate work in business.

The School of Business follows general regulations in requiring a 3.0 cumulative grade-point average for all course work counted toward any master’s degree. The School of Law requires a minimum cumulative grade-point average of 2.0 (C) in all law school work. Grades received in any law courses credited toward fulfillment of the M.B.A. degree requirements are incorporated into the M.B.A. grade-point average, which ultimately must be 3.0 for the awarding of the M.B.A. degree.

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 toward a concentration in finance.
2. Complete MGMT 704 Strategic Management (2 hours) unless a substitution is allowed.
3. Pass a comprehensive examination in the concentration, prepared and evaluated by at least three graduate faculty members in the area.

Undergraduate prerequisites that were not completed during the undergraduate program must be taken during initial enrollment and do not count toward fulfillment of the degree requirement of 30 hours.

The Master of Science degree program is for students who have completed a baccalaureate degree in business or a related degree as prescribed by the American Assembly of Collegiate Schools of Business and want to do concentrated study in a specific business area. Deficiencies in a student’s undergraduate program result in additional hours being required for the degree. These are determined before or at the time of initial enrollment.

A concentration in finance is offered. Availability depends on sufficient demand, 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.

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Submit your application online at www.law.ku.edu/GAPC. Send original transcripts of all completed college and university course work to

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Strong Hall, 1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

Send all other requested application materials to
The University of Kansas School of Business
Master’s Applications
1300 Sunnyside Ave.
Lawrence, KS 66045-7585


See www.law.ku.edu for online information about KU’s School of Law.
Combined M.B.A./J.D. • M.B.A./M.A. in Area Studies • M.B.A./Pharm.D.

Combined Degree Requirements
A typical enrollment pattern for the candidate for the two degrees under the combined program would be:

<table>
<thead>
<tr>
<th></th>
<th>Business</th>
<th>Law</th>
<th>Total</th>
</tr>
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<td>24</td>
<td>30</td>
</tr>
<tr>
<td>Fourth Year</td>
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<td>20</td>
</tr>
<tr>
<td><strong>Total Credit Earned</strong></td>
<td><strong>40</strong></td>
<td><strong>76</strong></td>
<td><strong>116</strong></td>
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</tr>
<tr>
<td><strong>Total Credit Required</strong></td>
<td><strong>52</strong></td>
<td><strong>90</strong></td>
<td><strong>142</strong></td>
</tr>
</tbody>
</table>

*Must include Professional Responsibility

Specific Course Requirements. Law Courses Required of All J.D. Candidates (44 credit hours):

First-year Courses (32 credit hours):
- LAW 804 and LAW 805 Civil Procedure I and II ........................................... 6
- LAW 809 and LAW 810 Contracts I and II .................................................... 6
- LAW 814 Criminal Law .................................................................................. 2
- LAW 818 Criminal Procedure ......................................................................... 3
- LAW 820 and LAW 821 Lawyering I and II ............................................... 6
- LAW 826 and LAW 827 Property I and II ......................................................... 6
- LAW 831 Torts I ......................................................................................... 4

Second- and Third-year Courses (12 credit hours):
- LAW 873 Commercial Law: Secured Transactions ........................................ 3
- LAW 882 Constitutional Law ........................................................................ 4
- LAW 908 Evidence ......................................................................................... 3
- LAW 972 Professional Responsibility ......................................................... 2

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):
- LAW 853 Taxation of Business Enterprises ..................................................... 3
- LAW 865 and LAW 866 Business Associations I and II .................................. 6
- LAW 874 Commercial Law: Payment Systems .............................................. 3
- LAW 913 Federal Income Taxation .................................................................. 3
- and two of the following:
  - LAW 850 Administrative Law (3)
  - LAW 858 Agriculture Law (3)
  - LAW 865 Antitrust Law (3)
  - LAW 864 Advanced International Trade Regulation (3)
  - LAW 866 Business Planning Seminar (3)
  - LAW 869 Capital Raising by Privately Held Business Firms (3)
  - LAW 872 Commercial Arbitration (3)
  - LAW 876 Advanced Topics in Labor and Employment Law (2-3)
  - LAW 886 Copyright Law and Digital Works (3)
  - LAW 889 Bankruptcy (3)
  - LAW 897 Qualified Retirement Plans (1)
  - LAW 903 Employment Discrimination Law (3)
  - LAW 906 Estate Planning: Principles (3)
  - LAW 907 Estate Planning: Practice (3)
  - LAW 915 Federal Tax Procedure (2)
  - LAW 917 Governmental Control of Land Development (2-3)
  - LAW 925 Employment Law (3)
  - LAW 926 Insurance (3)
  - LAW 936 International Economic Law and Development (3)
  - LAW 939 Labor Law I (3)
  - LAW 941 Land Transactions (3)
  - LAW 944 International Trade Regulation (3)
  - LAW 945 International Commerce and Investment (3)
  - LAW 968 Intellectual Property (3)
  - LAW 971 Product Liability (3)
  - LAW 980 Regulation of Air and Water Pollution (3)
  - LAW 981 Regulation of Toxic Substances and Hazardous Waste (2-3)
  - LAW 982 Regulatory Law and Policy (3)
  - LAW 986 Securities Regulation (5)
  - LAW 989 Tax Policy (3)
  - LAW 990 Taxation of Mergers and Acquisitions (3)

Note: If a student elects either Securities Regulation or any two of the above courses with 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 (20 credit hours):
- MGMT 701 Organizational Behavior ............................................................... 2
- BE 701 Managerial Economics ....................................................................... 2
- ACCT 701 Financial Accounting .................................................................... 2
- DSCL 701 Statistical Decision Making ............................................................ 2
- BMGT 701 Managing in a Global Environment ............................................. 2
- MKT 705 Marketing Management .................................................................. 2
- MGMT 706 Professional Development Skills I ............................................. 1
- MGMT 807Ethical Decision Making in Business ............................................ 2

Breadth Courses (6 credit hours, choose three of four courses):
- MGMT 702 Human Resources Management
- IST 701 Managerial Information Systems
- ACCT 702 Managerial Accounting
- DSCL 702 Operations Management

Business Electives .................................................................................. 14

For more information, review the materials on the regular programs in the School of Law Catalog and the M.B.A. section of this chapter of the catalog, or contact the University of Kansas, Associate Dean, School of Law, Green Hall, 1535 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 M.A. in Area Studies
To respond to the need for business graduates who also have foreign language and geographic area expertise, the School of Business and the College of Liberal Arts and Sciences developed a joint M.B.A./M.A. program. The School of Business now offers a joint degree program with KU’s nationally recognized area studies programs in East Asian Languages and Cultures; Latin American Area Studies; and Russian, East European, and Eurasian Studies. The Centers for East Asian Studies and Russian, East European, and Eurasian Studies are Title VI Comprehensive National Resource Centers. The program requires completion of 64 hours of course work. After all degree requirements for the joint program have been met, a Master of Arts degree and a Master of Business Administration degree are awarded.

Prospective students must submit applications to the School of Business and follow the application procedures for the business master’s programs. Students must meet the prerequisites of and be accepted by the School of Business and the area studies program. The School of Business is the administrative home of the joint degree program. However, the school and the programs share advising duties and jointly certify the completion of degree requirements.

Combined M.B.A. and Pharm.D.
This dual degree program allows students to earn an M.B.A. from the School of Business and a Doctor of Pharmacy from the School of Pharmacy by extending their professional graduate study by one calendar year. Students gain competence and expertise in the complementary fields of business management and pharmacy. It is particularly appropriate for those intending to man-

See the College of Liberal Arts and Sciences chapter of this catalog for area studies program listings.

See the KU Undergraduate Catalog for information about the Doctor of Pharmacy degree.
M.B.A./Pharm.D. • M.B.A./Master’s in Management–ESC Clermont • M.B.A. Petroleum Management • Doctor of Philosophy

age a retail or health-system pharmacy or assume a leadership role in the pharmaceutical industry or in managed health care.

Prospective students must submit applications to the School of Business and the School of Pharmacy. Students must meet the prerequisites of and be accepted by both schools.

M.B.A./Master’s in Management from ESC Clermont Graduate School of Management

This dual degree program allows students to earn an M.B.A. from KU and a Master’s in Management from ESC Clermont Graduate School of Management in France. The program is intended for American students who wish to pursue careers with international companies in North America or Europe. Students complete all requirements for a KU M.B.A. and take one semester of classes taught by European faculty members in English at Clermont-Ferrand. The academic preparation is followed by a four- to six-month internship in a European country.

Prospective students should submit applications to the KU School of Business, which forwards successful applications to ESC Clermont Graduate School of Management. Students must meet the normal admission requirements of and be accepted by both schools.

M.B.A. with a Concentration in Petroleum Management

The M.B.A. with a concentration in petroleum management offers a cutting-edge curriculum for those seeking positions with managerial responsibilities in the public and private sectors. KU’s program emphasizes broad concepts of business administration that progress to specific areas in petroleum management. KU offers the program full time on the Lawrence campus in addition to evening courses available on the KU Edwards Campus. This is a specially designed course of study. The program meets the requirements of active-duty U.S. Naval Supply Corps officers and Air Force officers who usually are assigned to billets requiring this training upon completion of study at KU.

Doctor of Philosophy

The program is designed for students who wish to become scholar-teachers. It develops the capacity for effective teaching and original research by providing mastery of the knowledge in a particular field, a thorough understanding of research methodology, the ability to communicate effectively, and the motivation for continuing self-education. Students must specialize in a concentration and develop a broad knowledge of other areas of business and their interrelationships in the management function.

As of fall 2006, 29 students were enrolled in the Ph.D. program. The program will continue to be limited in size so each student can work closely with faculty members to receive substantial individual attention.

Admission

The applicant must hold at least a bachelor’s degree from an accredited college or university. No specific undergraduate preparation in business is required.

The applicant must demonstrate competence as a scholar through a high level of previous academic performance and high percentile scores on the Graduate Management Admission Test or Graduate Record Examination. Scores may not be older than five years at the time of application. In addition, international applicants must present high scores on the Test of English as a Foreign Language.

Finally, the applicant must demonstrate the ability for doctoral study in business, either by a record of achievement in previous professional or academic experience, including research and scholarship, or through letters of recommendation and a personal interview.

These requirements are intended only as suggestions for minimum admission standards. They should not be construed as a guarantee of admission to the Ph.D. program.

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Strong Hall, 1450 Jayhawk Blvd., Room 313
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Send all other requested application materials to

The University of Kansas School of Business
Doctoral Applications
1300 Sunnyside Ave.
Lawrence, KS 66045-7585

Ph.D. Degree Requirements

By the end of the third semester of the aspirant’s program (excluding summer sessions), an aspirant must complete the following qualifier requirements. All aspirants must demonstrate some proficiency in doing original research of publishable quality and some proficiency in teaching. Each Ph.D. student must take a two-course sequence in probability and statistical methods. (This requirement may be satisfied by taking DSCI 920 and DSCI 921 or equivalent courses in other departments.) Students also must take one course in microeconomic theory (BE 917 or ECON 700 or equivalent courses in other departments). These courses should be completed within the first two years of the program. In addition to these three courses, students must take three area-specific core courses defined by their area group. At or before the end of the aspirant’s third semester in the program, a qualifier assessment team, composed of five faculty members, holistically determines whether or not a student continues in the program.

The aspirant for the Ph.D. in business administration must have an area of concentration, supporting areas, and preparation in research methodology.

Concentration. Each aspirant, with the assistance of her or his faculty adviser and the area faculty, selects an area of concentration from the traditional business disciplines of accounting, information systems, finance, human resources, decision sciences, marketing, organizational behavior, and strategic management. An aspirant also may propose an interdisciplinary concentration that is a combination of these disciplines, or may include emphases such as international business, law, and economics. The aspirant must take at least five advanced courses in the concentration. These courses may include those offered outside the School of Business.

Supporting Areas. Course work in the area of concentration is supplemented and strengthened by study in one or two supporting areas. A supporting area is one that supplements and complements the concentration. The aspirant satisfies the supporting area requirement by taking at least four advanced courses in the supporting areas (at least two courses in each of two supporting areas or at least four courses in one supporting area). Courses recommended for preparation for the qualifier assessment may not be included in satisfying the supporting area requirement.
Research Methodology. When preparing for the qualifier assessment, area groups should ensure that the student’s program includes adequate preparation in research methodology.

Teaching. Students enroll in BUS 902 Teaching Seminar during the first semester in which they teach independently. Before the completion of the Ph.D. program, all students also must have teaching experience equivalent to teaching two undergraduate courses independently in two different semesters.

Examinations. To advance to candidacy, the student must pass a written-oral comprehensive examination in the concentration. Before completion of the written-oral comprehensive, students enroll in a Ph.D. seminar for each of four semesters. In this seminar, students and faculty present original research.

Finally, the student must pass an oral defense of the dissertation research proposal and the dissertation.

Financial Aid

Students admitted to the Ph.D. program receive financial assistance. Contingent on satisfactory progress and availability of funds, the school provides financial assistance to most students for the first four years of their programs. Financial assistance is available in varying degrees through assistantships, fellowships, grants, loans, and employment.

Assistantships. During the first year, most doctoral students are appointed as research assistants. Subsequently, most doctoral students are appointed as graduate teaching assistants. Many doctoral students also receive dissertation fellowships while writing their theses. During 2006-07, a 50-percent-time graduate research assistantship paid about $1,520 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 SPEAK test or the Test of Spoken English administered by the Applied English Center at KU. During 2006-07, a graduate teaching assistantship paid about $1,520 per month. See also Financial Aid in the General Information chapter of this catalog.

Fellowships and Grants. The School of Business has been successful in nominating doctoral students for fellowships and grants from sources outside the school. Business students have received awards from the Richard D. Irwin Foundation, the American Institute of Certified Public Accountants, Beta Gamma Sigma, the American Accounting Association, and KU. Several dissertation fellowships normally are awarded annually. These awards allow the student to receive support for a semester while working on his or her dissertation.

The School of Business maintains active files on these and other sources of fellowships and grants, recommends qualified students for the awards, and works closely with students in submitting application materials. Assistance in the form of loans or employment is available through the University of Kansas Office of Student Financial Aid, Strong Hall, 1450 Jayhawk Blvd., Room 50, Lawrence, KS 66045-7535.

Business Courses

I Accounting Courses

ACCT 500 Individual Research in Accounting: _____ (1-5).

ACCT 543 Introduction to Auditing (3).

ACCT 545 Advanced Taxation (3).

ACCT 599 Internship in Accounting (1-3).

ACCT 701 Financial Accounting (2). Financial accounting provides information to decision-makers external to the business, such as investors and lenders. The course describes the process through which economic information is captured, validated, and distributed externally in the form of financial statements. It also covers the contents of the major financial statements, focusing on how the various accounts are defined and measured and how the information can be used by external decision-makers. LEC

ACCT 702 Managerial Accounting (2). Managerial accounting provides information to decision-makers within the business, such as supervisors and executives. The course describes the process through which economic information is captured 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. Prerequisite: ACCT 701 (BUS 703). Enrollment restricted. LEC

ACCT 704 Financial Statement Presentation and Analysis I (2). This course covers topics in intermediate-level financial accounting and financial statement analysis. Accounting topics are taught from an external decision-maker’s perspective. Not open to students who have credit in ACCT 320, ACCT 410, ACCT 721, or ACCT 722. Prerequisite: ACCT 701 (BUS 703). LEC

ACCT 705 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 ACCT 320, ACCT 410, ACCT 721, or ACCT 722. Prerequisite: ACCT 701 (BUS 703). LEC

ACCT 707 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, partnership, corporation, S corporation, or partnership are analyzed. Prerequisite: ACCT 701 (BUS 703) or equivalent. LEC

ACCT 721 Advanced Accounting Problems (3). Advanced problems in bankruptcy, estates and trusts, installment and consignment sales, insurance settlement, consolidated statements and other areas of importance to the practice of public accounting. Prerequisite: ACCT 410. Enrollment restricted. LEC

ACCT 722 Current Issues in Financial Reporting (3). 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: ACCT 410. LEC

ACCT 724 Applied Accounting Theory (3). This course develops an understanding of the roles of accounting theory, economics, and politics in the national and international standard setting process. The course also focuses on using research tools to address contemporary questions in financial reporting for corporations. Case studies often are used for these purposes. The specific topics that are addressed will change over time, but typically will include a number of controversial and problematic current or recent reporting issues. Prerequisite: ACCT 410. Enrollment restricted. LEC

ACCT 726 Advanced Managerial Accounting—Quantitative and Economic Topics (3). Through judicious use of quantitative methods including statistical decision theory, this course provides a conceptual analysis of several prominent managerial accounting topics. This course is intended to assist both public accountants and management accountants to understand management decision-making processes and information requirements thereof. Prerequisite: ACCT 325. LEC

ACCT 728 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 creation and use of information for managerial decisions. Prerequisite: ACCT 325 or ACCT 702 (BUS 710). Enrollment restricted. LEC

ACCT 731 Tax Research (3). A course designed to develop one’s ability to use the research tools available and provide comprehensive coverage of the many aspects of tax research. Emphasis is placed on locating authoritative, solving tax problems, and communicating the results. Prerequisite: ACCT 330 or ACCT 335, or ACCT 706 (BUS 733). Enrollment restricted. LEC

Students graduating from the Ph.D. program in business have taken positions at such prestigious institutions as Duke, Rutgers, and Texas A&M.

Business doctoral students receive a great deal of faculty mentoring as they prepare to be outstanding teachers and researchers.
ACCT 732 Taxation for Business Entities (4). A study of federal income taxation for corporations, subchapter S corporations, and partnerships. The tax problems associated with formation, operation, distributions, redemptions, reorganizations, and selected special topics will be analyzed. Prerequisite: ACCT 545 and ACCT 733 (BUS 740). Enrollment restricted. LEC

ACCT 733 Tax Planning (3). A study of the fundamentals of Federal estate and gift taxation, the income taxation of estates and trusts, and the various aspects of family tax planning. The course will develop one's ability to research and construct a comprehensive tax plan in a family context. Prerequisite: ACCT 350, ACCT 335, or ACCT 729 (BUS 736). Enrollment restricted. LEC

ACCT 741 Fraud Examination and Forensic Accounting (3). Explores various academic approaches to fraud to include factors learned from other disciplines such as sociology and psychology. Students will review the vast body of knowledge gained by fraud professionals throughout the world and will attempt to gain an understanding of factors that lead to the prevention of financial statement and occupational (employee) fraud. Some of the topics covered include: skimming transactions, identity fraud, computer schemes, money laundering, bribery and kickbacks, and corporate espionage. Prerequisite: ACCT 701 (BUS 703), ACCT 702 (BUS 710) or equivalent. LEC

ACCT 742 Advanced Auditing (3). 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 audit evidence and qualifications therein. Prerequisite: ACCT 545. Enrollment restricted. LEC

ACCT 743 Evaluating Internal Controls in Computerized Accounting Systems (3). This course examines how organizations develop, implement, and monitor control practices of their computer systems. Students will assume the role of an organization’s director of internal control and will make recommendations for improvements to existing systems. From a management perspective, students will learn how to analyze the organization’s internal control environment, assess risks that threaten the organization’s ability to achieve its operating objectives, and establish control objectives for managing those risks. In an auditing perspective, students will learn how to evaluate the design, test the operation, and report on the effectiveness of internal controls in accordance with the provisions of the Sarbanes-Oxley Act of 2002. LEC

ACCT 895 Graduate Seminar in Accounting: (0.50-5). A variable-topic seminar open only to graduate students meeting the requirements established by faculty members offering the course. Prerequisite: Consent of Area Director. Enrollment restricted. LEC

ACCT 898 Independent Study for Master's Students (1-6). Individual study of selected problems in the field of accounting, 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

ACCT 925 Seminar in Contemporary Accounting Theory II (3). (S) Continuance of BUS 740 with emphasis on the economic and social factors affecting the development of contemporary accounting theory. Each student will present oral and written presentations of his/her original investigation and analysis of contemporary controversial issues. Prerequisite: Consent of Ph.D. adviser. LEC

ACCT 927 Seminar in Management Accounting (3). (V) The objective of this course is to provide a review and a forum for discussion 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 management control, interaction between accounting information systems, variance analysis, and cost allocations. Prerequisite: Consent of Ph.D. adviser. LEC

ACCT 995 Doctoral Seminar in Accounting: (2-5). A variable-topic seminar open only to graduate students meeting the requirements established by faculty members offering the course. Prerequisite: Consent of instructor. LEC

ACCT 997 Directed Research in Accounting (1-5). Students will research selected topics in the field of business administration under the direction of a graduate faculty member. Students are expected to report the results of their research by writing a publishable-quality scholarly article. Graded on satisfactory/unsatisfactory basis. Prerequisite: Approval required from supervising graduate faculty member. RSH

ACCT 998 Independent Study for Doctoral Students (1-5). Individual study of selected current problems in the field of business management to be adapted to the special interests and objectives of the students and conducted through extensive reading and research. Student must submit written statement of proposed project approved by supervising faculty member and Director, Doctoral Program prior to enrollment. Prerequisite: Approval required from supervising faculty member and Director, Doctoral Program. RSH

ACCT 999 Doctoral Dissertation (1-12). (V) Individual research work. THE

Business Courses

BUS 500 Individual Research in Business (1-5).

BUS 599 Internship in Business Administration (1-3).

BUS 795 Special Topics in Business: (2-5). A variable-topic course open to graduate and selected undergraduate students meeting the requirements established by faculty members offering the course. Prerequisite: Determined by the instructor. RSH

BUS 899 Master's Thesis (3-4). (V) Individual research work. Approval of faculty supervisor required. THE

BUS 902 Research Seminar in Business: (2). A core course for Ph.D. students majoring in business administration. Provides a forum 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 members are expected to attend. All Ph.D. students 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 skills of Ph.D. students. Participants should work with their teaching mentors and teachers to discuss the teaching techniques and discuss the reasons underlying their actions. School of Business Ph.D. students are required to take this seminar during the first semester in which they are the instructor of record for a course. LEC

Business Economics Courses

BE 701 Managerial Economics (2). This course uses economic theory and methodology to understand and improve managerial decision making. The focus is on the role of markets in determining business and individual opportunities to create value, the behavior of 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

BE 702 Global Economic Environment of Business (2). This course uses economic theory to explain how business functions in a global context. Throughout the course, the impact of the global economic environment on business decision making and performance is emphasized. Students will learn the ways in which government monetary and fiscal and regulatory policies affect global markets and firm performance. LEC

BE 710 Introduction to International Economics (2). This course applies the insights of the economic theory of the firm to the management of organizations. Topics 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 through ownership or contract; M-form versus U-form of corporate structure; and an introduction to multinational management. Prerequisite: BE 701 (BUS 702) or ECON 520 or consent of instructor. LEC

BE 712 Political Strategies for Managers (2). Managers act within the context of markets and “non-markets” that are composed of laws, regulations, and guide-lines. This course first analyzes business strategies that can 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. In addition to working through the assigned cases, students will also examine media influences and political strategies applicable to international markets. Prerequisite: BE 701 (BUS 702) or consent of instructor. LEC

BE 713 Public Policy Toward Business (2). This course examines justifications for government interventions in business practice and structure. The implications of various methods are analyzed and compared, such as economic regulation, direct economic regulation of industries, antitrust law, subsidization of firms and industries, and privatization will be considered. Prerequisite: BE 701 (BUS 702) or consent of instructor. LEC

BE 795 Special Topics in Business: (2-5). A variable-topic course open to selected undergraduate students meeting the requirements established by faculty members offering the course. Prerequisite: Determined by the instructor. Enrollment restricted. LEC

BE 895 Graduate Seminar in Business Economics: (0.50-5). A variable-topic seminar open only to graduate students meeting the requirements established by faculty members offering the course. Prerequisite: Consent of Area Director. Enrollment restricted. LEC

BE 898 Independent Study for Master's Students (1-6). Individual study of selected current problems in the field of economics to be adapted to the special interests 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

BE 917 Advanced Managerial Economics (3). (F) This course is designed primarily for Ph.D. students majoring 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 theory and understand 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 own field of research. Masters students may enroll with consent of instructor. LEC

BE 995 Doctoral Seminar in Business Economics: (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

BE 997 Directed Research in Business Economics (1-5). Students will research selected topics in the field of business administration under the direction of a faculty member. Students are expected to report the results of their research by writing a publishable-quality scholarly article. Graded on satisfactory/unsatisfactory basis. Prerequisite: Approval required from supervising graduate faculty member. RSH

GRADUATE CATALOG

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BE 998 Independent Study for Doctoral Students (1-5). Individual study of selected current problems in the field of business management to be adapted to the special interests and objectives of the students and conducted through extensive reading and research. 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

Business Law Courses
BLAW 500 Individual Research in Business Law (1-5). LEC
BLAW 505 Legal Aspects of the Management Process (3). LEC
BLAW 510 Legal Aspects of Real Property Transactions (3). LEC
BLAW 515 Commercial Law (3). LEC
BLAW 701 Introduction to the Legal Environment of Business (2). 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
BLAW 702 Legal Aspects of Business Transactions: Contracts and Torts (2). A course focused on understanding legal rights and duties and ethical responsibilities in the contract and tort law. Contract law and tort law serve as the foundation for many other areas of law that are relevant in the business environment. Prerequisite: BLAW 301 or BLAW 701 (BUS 708). LEC
BLAW 703 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 entities (such as partners, stockholders, directors, officers, contractors, employers, and employees) functioning in the context of the environment in which they are considered. Also discussed are the interests of third parties, including the public, which brings into focus related topics, such as securities regulations, ethics, and corporate social responsibility. Not open to students with credit in BLAW 505. Prerequisite: BLAW 701 (BUS 708). LEC
BLAW 704 Commercial Code (3). An examination of the Uniform Commercial Code and related legal topics, such as bankruptcy and property law. Not open to students with credit in BLAW 515. Prerequisite: BLAW 301 or BLAW 701 (BUS 708). LEC
BLAW 985 Graduate Seminar in Business Law: (0.50-5). A variable-topic seminar open only to graduate students meeting the requirements established by faculty members offering the course. Prerequisite: Consent of Area Director. Enrollment restricted. LEC

Decision Sciences Course
DSCI 500 Individual Research in Decision Sciences (1-5).
DSCI 701 Statistical Decision Making (2). An introduction to data gathering and analysis with an emphasis on problem solving for decision making and process improvement in the 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 for 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
DSCI 702 Operations Management (2). This course examines the business from an operations mindset. Topics covered include supplier relationships, JIT and OPI, quality, customer-focus, and manufacturing as a competitive advantage. A systems approach is used to view variation as being stressed instead of a functional view. Prerequisite: DSCI 701 (BUS 704). LEC
DSCI 710 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: ISIT 701 (BUS 709). LEC
DSCI 715 Managing for Quality Improvement (3). This course will take a closer look at various aspects of the total quality theory and its practices. Particular attention will be paid to the 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: DSCI 702 (BUS 719). LEC
DSCI 730 Managing Customer Focused Enterprises (2). An introduction to management principles supporting the concept that a primary goal of a business is to meet the needs of its customers. To accomplish this goal, organizations must design, build, and deliver products and services that meet customer needs in a resource-effective manner. Topics covered include the role of the customer, the nature of product improvement in meeting customer needs in a cost effective manner, the view of the organization as a system, the reduction of variation in all organizational processes, the nature of continual organizational learning, and the responsibilities of management in this approach. LEC
DSCI 740 Seminar in Decision Sciences: (3). 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: DSCI 701 (BUS 704) and DSCI 744 (BUS 704). LEC
DSCI 744 Statistical Process Control and Improvement (2-3). This course deals with process improvement through the reduction and control of variation in business organizations. The result of reduced variation is an improvement of integral quality and an increase in the competitiveness of a business. A partial list of these strategies include quality improvement, control systems, just-in-time, and manufacturing planning and control systems. Prerequisite: DSCI 701 (BUS 704). LEC
DSCI 746 Contemporary Issues in Operations Management (3). This course will examine recent developments in the broad area of manufacturing and the modern business environment. A partial list of these strategies include quality improvement, control systems, just-in-time, and manufacturing planning and control systems. Prerequisite: DSCI 701 (BUS 704). LEC
DSCI 795 Special Topics Decision Science: (1). (2-5). A variable-topic seminar open only to graduate students meeting the requirements established by faculty members offering the course. Prerequisite: Consent of Area Director. Enrollment restricted. LEC
DSCI 895 Graduate Seminar in Decision Science: (0.50-5). A variable-topic seminar open only to graduate students meeting the requirements established by faculty members offering the course. Prerequisite: Determined by the instructor. Enrollment restricted. LEC
DSCI 898 Independent Study for Master’s Students (1-6). Individual study of selected current problems in the field of decision science to be adapted to the special interests and objectives of the students and conducted through extensive reading and research. Prerequisite: A minimum of 3.0 grade point average and be in good standing in a graduate program. This course will be limited to the discussion for at least one part of their research. Graded on satisfactory/unsatisfactory basis. LEC
DSCI 910 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
DSCI 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: DSCI 920. LEC
DSCI 934 Seminar in Probability and Statistics: (1). (V) This course will cover advanced topics in probability and statistics with application to various business disciplines. Topics covered may vary and will depend on the instructor. Examples of topics that may be covered are time series models, stochastic processes, uncertainty in artificial intelligence, multivariate statistics, etc. Prerequisite: DSCI 920 and DSCI 921, or consent of instructor. LEC
DSCI 936 Management Science Research Seminar (1). 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 part of their research. Graded on satisfactory/unsatisfactory basis. LEC
DSCI 997 Directed Research in Decision Science (1-5). Students will research selected topics in the field of business administration under the direction of a graduate faculty member. 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
DSCI 998 Independent Study for Doctoral Students (1-5). Individual study of selected current problems in the field of business management to be adapted to the special interests and objectives of the students and conducted through extensive reading and research. 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
DSCI 999 Doctoral Dissertation (1-12). (V) Individual research work. THE

Entrepreneurship Courses
ENTR 500 Individual Research in Entrepreneurship: (1-5).
ENTR 701 Entrepreneurship (3). This course provides an opportunity to learn and practice the skills needed to build successful businesses. As the life-cycle of a growth oriented firm, the emphasis is taking an entrepreneurial idea to market in both private and corporate sectors. Numerous guest lecturers bring contemporary entrepreneurship and “intrapreneurial” perspectives into the classroom. Web-based information and the use of computer software in the class meets in the computer lab, where numerous software platforms are utilized in financing, marketing, accounting, and managerial exercises. Prerequisite: ACCT 701 (BUS 703). LEC
ENTR 895 Graduate Seminar Entrepreneurship: (0.50-5). A variable-topic seminar open only to graduate students meeting the requirements established by faculty members offering the course. Prerequisite: Consent of instructor. LEC
M.B.A. students may choose a concentration option in an area of business that fits their own interests and goals.

The Wagner Microcomputer Laboratory offers 40 computers and 65 software programs to business students.

Finance Courses

FIN 500 Individual Research in Finance (1-5)
FIN 599 Internship in Finance (1-3).
FIN 701 Financial Management (2). 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: ACCT 701 (BUS 703). LEC.
FIN 705 Investment Theory (2). This course provides a framework for describing the nature of securities markets. The focus is 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 622. Prerequisite: FIN 701 (BUS 709) or consent of instructor. LEC.
FIN 706 Investment Analysis (2). This course emphasizes the applications aspects of investments. Various valuation methods are applied to securities of different types with emphasis on bonds, common stocks, options and futures. Cases are often used to convey key concepts and strategies. Not open to students with credit in BUS 622. Prerequisite: FIN 705 (BUS 751) or consent of instructor. LEC.
FIN 710 Analysis of Financial Intermediaries (2). This course focuses on the principal elements of theoretical and practical controversies in the area of financial institutions. Contemporary issues facing these institutions in conjunction with historical and evolutionary developments are a hallmark of the course. Not open to students with credit in FIN 700. Prerequisite: FIN 701 (BUS 709). LEC.
FIN 715 Real Estate Investment Analysis (2). This course stresses the practical applications of real estate analysis that can be drawn from theoretical foundations to assist the real estate manager in long-range planning. Particular emphasis is placed on real estate valuation, financing, tax consequences, ownership and the role of government in real estate. Prerequisite: FIN 701 (BUS 709). LEC.
FIN 720 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, exchange rate risk and 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: FIN 701 (BUS 709) or consent of instructor. LEC.
FIN 725 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. Prerequisites: FIN 705 (BUS 751), FIN 745 (BUS 762), or FIN 746 (BUS 763). LEC.
FIN 730 Applied Portfolio Management (4). This course provides the student with practical portfolio experience. Students actually and collectively manage funds in the field of information systems to be adapted to the special interests and objectives of the students and conducted through extensive reading and research. Students must have at least a 3.0 grade point average and be in good academic standing in a graduate business program and must submit a written statement of the proposal project approved by a supervisory faculty member prior to enrollment. RSH.
FIN 735 International Finance (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, optimal capital structure, dividend policy, and a variety of long-term financing problems. Not open to students with credit in FIN 415, BUS 754, BUS 762 or equivalents. Prerequisite: FIN 701 (BUS 709) only, or consent of instructor. LEC.
FIN 746 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, optimal capital structure, dividend policy, and a variety of long-term financing problems. Not open to students with credit in FIN 415, BUS 754, BUS 762, or equivalents. Prerequisite: FIN 745 (BUS 762) or consent of instructor. LEC.
FIN 750 Entrepreneurial Finance (2). The course focuses on valuing and financing young high-growth potential private companies. A mixture of lectures and cases is used to expose students to various topics in entrepreneurial finance. Topics include: start-up valuation, the role of government in real estate, capital structure and investments, venture capital, the Entrepreneurial Finance method, and the Venture Capital method. Prerequisite: FIN 701 (BUS 709). LEC.
FIN 751 Entrepreneurial Finance II (2). The course focuses on valuing and financing young high-growth potential private companies. A mixture of lectures and cases is used to expose students to various topics in entrepreneurial finance. Topics include: start-up valuation, the role of government in real estate, capital structure and investments, venture capital, the Entrepreneurial Finance method, and the Venture Capital method. Prerequisite: FIN 701 (BUS 709). LEC.
FIN 759 Special Topics in Finance: (___-2-5). A variable-topic course open to graduate and selected undergraduate students meeting the requirements established by faculty members offering the course. Prerequisite: Determined by the instructor. Enrollment restricted. LEC.
FIN 895 Graduate Seminar in Finance: (___ 0-5). A variable-topic seminar open only to graduate students meeting the requirements established by faculty members offering the course. Prerequisite: Consent of Area Director. Enrollment restricted. LEC.
FIN 898 Independent Study for Master’s Students (1-6). Individual study of selected current problems in the field of finance to be adapted to the special interests and goals of the students and conducted through extensive reading and research. Students must have at least a 3.0 grade point average and be in good academic standing in a graduate business program and must submit a written statement of the proposed project approved by a supervisory faculty member prior to enrollment. RSH.
FIN 918 Macroeconomics for Research in Business (3). This course is designed primarily for doctoral candidates in business administration. The basic Classical and Keynesian 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 policy, the unemployment-inflation trade-off, wealth effects, rational expectations, and international policy issues. The focus is on a comparative statics analysis of equilibrium, and the stability of equilibrium. Prerequisite: ECON 522 and MATH 115 and (MATH 116 or MATH 121), or consent of instructor. LEC.
FIN 922 Advanced Regression (3). This course presents various statistical tools for undertaking quantitative research in business. The regression model under the full ideal conditions is discussed, along with methodological issues that arise when these ideal conditions are violated, as often occurs in business research. A high degree of theoretical rigor is maintained, along with an emphasis on practical applications through the use of assignments that require data analysis. Prerequisite: DSCI 921 or consent of instructor. LEC.
FIN 937 Seminar in Business Finance (3). This course is designed to develop the students’ analytical abilities. Course material is of a theoretical and empirical na-
Business Courses (FIN, IST)

Information Systems Courses
IST 500 Individual Research in Information Systems Technology (1-5).
IST 599 Internship in Information Systems Development (2).
IST 701 Managerial Information Systems (2). This course provides a broad, managerial level introduction to fundamental information technology concepts and terminology and the application of those concepts in business organizations. It addresses a variety of topics including: the Internet, intranets, and extranets; relational database theory; hardware, software, and networking concepts; the system development life cycle, project management; e-Business/e-Commerce; knowledge management; enterprise resource planning; ethical considerations related to information systems. The course focuses on the knowledge and expertise required for managers to successfully leverage information systems assets in a business setting.

IST 702 Systems Development (3). This course focuses on the practical issues of system development. A main objective of the course is to teach students system development through programming projects. In addition, the course examines the software engineering issues involved in system development, including usability and design issues. To enhance the quality of the system developed, the course also looks into software testing and evaluation issues. Prerequisite: IST 301, or IST 701 (BUS 706) or concurrent enrollment in IST 701 (BUS 706). Enrollment restricted.

IST 704 Database Management (3). This course provides insight to the managerial and organizational issues that surround the development and implementation of database systems in organizations. Students will undertake a project that allows them to experience the database development process while learning and practicing 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 also will 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: IST 301 or IST 701 (BUS 706). Enrollment restricted. LEC

IST 706 Systems Analysis and Design (3). This course develops skills with regard to the Analysis and Design activities typically encountered in an organizational software development environment. 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 case study using role-play techniques to simulate an actual analysis and design scenario. Prerequisite: IST 301 or IST 701 (BUS 706). Enrollment restricted. LEC

IST 708 Strategic Information Systems Planning (3). This course has two objectives. The first objective is to give graduate students an understanding of the need for high level IT strategy in organizations. This is accomplished through case analysis, the experiential learning of strategic concepts and through interaction with IT executives. IT strategy is explored at the executive levels of an organization. The second objective of the course is to give students experience working on projects/research and presenting materials as is done in developing IT strategy for real organizations. Prerequisite: IST 301 or IST 701 (BUS 706). Enrollment restricted.

IST 709 Business Computer Networking (3). This course exposes graduate business students to the technical and managerial aspects of business networking. The course will provide students with a foundation in network theory and technology. Business network administration and operation will be a major component of the course. The course will use cases and outside readings to focus on key network management issues and to present emerging network technologies. Prerequisite: IST 301 or IST 701 (BUS 706). LEC

IST 710 Information Security (3). This course will introduce, at a managerial rather than highly technical level, a range of topics associated with security of information systems and related data in a business environment. Topics addressed include cryptography and security of operating systems, databases, networks, both wired and wireless, and telecommunications systems. The course also considers security issues related to application development, including management of the change control process, and to the use of the Internet as a business medium. Students will also discuss physical security, disaster recovery, business resumption planning, and managerial planning and techniques involved in creating a secure conscious organization. Prerequisite: IST 701/BUS 706. LEC

IST 715 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: IST 301 or IST 701 (BUS 706). Enrollment restricted. LEC

IST 720 Developments in Software Technology (3). This course is an introduction to object-oriented (OO) technology and the object paradigm. We 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, design, and implementation through projects with an OO programming language. Prerequisite: IST 701 (BUS 706); IST 702 (BUS 727). LEC

IST 730 IT Project Management (3). This course provides initial exposure to concepts related to the project management discipline generally, while focusing on management of information technology projects in particular. The course is organized to emphasize core project management knowledge areas developed by the Project Management Institute, and it stresses the benefits of a disciplined, formal project management methodology. Students completing the course will gain an appreciation for the complex nature of projects and be better prepared to be an effective member of project teams encountered in many types of organizations. Prerequisites: IST 701/BUS 706 or IST 301 and IST 703/BUS 753 or IST 706/BUS 738. LEC

IST 895 Graduate Seminar Information Systems: (0.50-5). A variable-topic seminar open only to graduate students meeting the requirements established by faculty members offering the course. Prerequisite: Consent of Area Director. Enrollment restricted. LEC

IST 898 Independent Study for Master's Students (1-6). (V) Individual study of selected current problems in the field of information systems to be adapted to the special interests and objectives of the students and conducted through extensive reading and research. Students must have at least a 3.0 grade point average and be in good academic standing in a graduate business program and must submit a written proposal of the proposed project approved by a supervisory faculty member prior to enrollment. RSH

IST 995 Doctoral Seminar in Information Systems: (2-5). A variable topic seminar open only to graduate students meeting the requirements established by faculty members offering the course. Prerequisite: Consent of instructor. LEC

IST 997 Directed Research in Information Systems (1-5). Students will research selected topics in the field of business management to be adapted to the special interests and objectives of the students and conducted through extensive reading and research. Student must submit written statement of proposed project approved by supervising faculty member and Director, Doctoral Program prior to enrollment. Prerequisite: Approval required from supervising faculty member and Director, Doctoral Program. RSH

IST 999 Doctoral Dissertation (1-12). (V) Individual research work. THE

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

Information about business studies in Asolo, Italy, through the Consortium of Universities for International Business Studies in Italy is available from (785) 864-7576.
IBUS 500 Individual Research in International Business (1-5).
IBUS 599 Independent Study or Internship (1-6).

IBUS 701 International Business (2). This introductory course aims at providing a framework for understanding the basic concepts, practices, and issues involved in international business and economic relations. Focus is placed on (1) the evolution of the present international monetary and trade systems, with emphasis on the role of the IMF and GATT (now the World Trade Organization); (2) the nature and current transition of former centrally planned economies; (3) the nature and prospects of less developed countries; and (4) the interdependence of the major industrial and non-industrial areas of the world and also of regional integration initiatives. LEC

IBUS 702 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 environment forces, the competitive context in which companies operate in global settings, the characteristics of global, multi-domestic and transnational strategies, global strategic alliances, the role or organizational structures, and the importance of strategic decisions and actions. Lectures are used to develop analytical and decision making skills and also highlight the reality of environmental uncertainties influencing decision making in the international context. LEC

IBUS 703 Business Practices in China (2). This course provides students an opportunity to learn about business in China by observing it in practice. Students will travel to China to visit a variety of companies and meet with their managers to learn about the unique opportunities and challenges faced by companies operating in China. Company visits will be selected to include both manufacturing and service firms and to reflect a variety of ownership structures (foreign subsidiaries, locally-owned companies, joint-ventures, etc.). Lectures from faculty at a Chinese host institution will provide specific information on the local business environment and cultural, historical and institutional context. Specific prerequisites may be required for a particular offering of this class. LEC

IBUS 704 Business Practices Latin America (2). This course provides students an opportunity to learn about business in Latin America by observing it in practice. Students will travel to a Latin American country to visit a variety of companies and meet with their managers to learn about the unique opportunities and challenges faced by companies operating in Latin America. Company visits will be selected to include both manufacturing and services firms and to reflect a variety of ownership structures (foreign subsidiaries, locally-owned companies, joint-ventures, etc.). Lectures from faculty at a Latin American host institution will provide specific information on the local business environment and cultural, historical and institutional context. Specific prerequisites may be required for a particular offering of this course. LEC

IBUS 706 Business Practices in India (2). This course provides students an opportunity to learn about business in a particular foreign country. Students will travel to the country of interest to visit a variety of companies and meet with their managers to learn about the unique opportunities and challenges faced by companies operating in that country. Company visits will be selected to include both manufacturing and services firms and to reflect a variety of ownership structures (foreign subsidiaries, locally-owned companies, joint-ventures, etc.). Lectures from faculty at an in-country host institution will provide specific information on the local business environment and cultural, historical and institutional context. Prerequisite: Determined for each topic by instructor. LEC

IBUS 895 Independent Study in International Business (1-6). Individual study of selected courses. This course is open to students who have met the field of business management to be attended 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

IBUS 704 Strategic Management (2). Strategic Management has as its primary objective the development of an understanding of the role of general management from both a conceptual and operating standpoint. The course is based on the strategic management framework emphasizing the evaluation of an organization’s strategic situation and the formulation of viable alternative strategies reflecting the challenges that need to be given to 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: MGMT 701 (BUS 701), FIN 701 (BUS 709), and ACC 702 (BUS 710) or MKTG 701 (BUS 711). LEC

IBUS 705 Managing in a Global Environment (1). This course focuses on economic, social, and political trends in the global environment and examines their implications for national and international business. Guest use will be made of guest speakers from other departments and local companies. Flexibility in format is required to accommodate instructional methods that will include lectures, discussions, cases, and simulations. Graded on a satisfactory/unsatisfactory basis. LEC

IBUS 706 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

IBUS 707 Professional Development Skills II (1). A continuation of Professional Development Skills I. Graded on satisfactory/unsatisfactory basis. FLD

IBUS 708 Management of Organizations (3). This course examines the evolution 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, (2) to 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: MGMT 701 (BUS 701) or equivalent for non-business majors. LEC

IBUS 710 Organizational Behavior (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: MGMT 701 (BUS 701). LEC

IBUS 711 International Business Strategy (3). This course provides students with 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 in the context. Prerequisite: MGMT 701 (BUS 701). LEC

IBUS 715 Management of Organizations (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, (2) to 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: MGMT 701 (BUS 701) or equivalent for non-business majors. LEC

IBUS 716 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: MGMT 701 (BUS 701). LEC

IBUS 717 Organizational Problem Solving (3). 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. Where the emphasis is on the substantive qualitative issues, there is coverage of some important topics in decision theory. Prerequisite: MGMT 701 (BUS 701) or equivalent for non-business majors. LEC

IBUS 718 Organizational Design (3). Organizations are viewed as interdependent systems whose changing environment requires adaptation and innovation among their strategic direction, their implementing organizational technologies, and their results. Organizations must also examine the bonding of their members within the organization and how they are 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: MGMT 701 (BUS 701) or equivalent for non-business majors. LEC

IBUS 720 Comparative and Cross Cultural Management (3). The course focuses on differences and similarities in organizational behavior and in the values and expectations of organization members from one society to another. A primary goal is to construct a model for understanding the 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 focus 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, China, Europe, Latin America, the Middle East, and the United States. Prerequisite: MGMT 701 (BUS 701). LEC

IBUS 721 Management of Workforce Diversity (3). The focus of this course is on understanding the increasing diversity of the U.S. workforce and implications of this diversity for management. An analysis of the changing 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 demographic trends in the United States, the changing composition of the workforce, and the development of strategies for managing cultural differences for major demographic groups, and strategies for effectively managing a diverse workforce. Prerequisite: MGMT 701 (BUS 701). LEC

IBUS 723 Advanced Topics in Management of Organizations: (2-5). A study of advanced topics in various subfields of Management of Organizations.
The course focuses on content, and approach will depend upon the particular topics to be covered. Reprinted with permission from Strategy: Preparing for Change in the 21st Century, 2003.

MGMT 724 Competitive Analysis and Strategy

The competitive process involves the formulation of strategic options, and the process of competitive strategy is about creating, maintaining, or achieving a competitive advantage. This course examines the process of formulating strategy, the formulation of strategy, and the implementation of strategy. It focuses on the role of strategy in creating and sustaining competitive advantage, and the process of strategy formulation. The course provides an introduction to the philosophy and process of strategy formulation, and the implementation of strategy. It also 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 assessment, methods of training program development, and evaluation, and implications for careers. The course is designed to provide students with a comprehensive understanding of the strategic role of human resources in the modern business environment.

MGMT 725 Management of Technology I: Technology and Strategy

The course focuses on the role of technology in strategy formulation and implementation. It examines the relationship between technology and strategy, and the process of strategy formulation. It also 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 assessment, methods of training program development, and evaluation, and implications for careers. The course is designed to provide students with a comprehensive understanding of the strategic role of human resources in the modern business environment.

MGMT 726 Management of Technology II: Technology and Operations

This course focuses on the role of technology in strategy formulation and implementation. It examines the relationship between technology and strategy, and the process of strategy formulation. It also 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 assessment, methods of training program development, and evaluation, and implications for careers. The course is designed to provide students with a comprehensive understanding of the strategic role of human resources in the modern business environment.

MGMT 727 Strategy Implementation

This course focuses on the role of technology in strategy formulation and implementation. It examines the relationship between technology and strategy, and the process of strategy formulation. It also 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 assessment, methods of training program development, and evaluation, and implications for careers. The course is designed to provide students with a comprehensive understanding of the strategic role of human resources in the modern business environment.

MGMT 728 Corporate Restructuring

This course focuses on the role of technology in strategy formulation and implementation. It examines the relationship between technology and strategy, and the process of strategy formulation. It also 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 assessment, methods of training program development, and evaluation, and implications for careers. The course is designed to provide students with a comprehensive understanding of the strategic role of human resources in the modern business environment.
Graham Computing Classroom has 34 PCs for teaching classes that make heavy use of computers.

KU business students work with faculty members who are leaders in business research.

The Harper Computing Classroom has 34 PCs for teaching classes that make heavy use of computers.

### Business Courses (MGMT, MKTG)

#### Marketing Courses

**MKTG 500 Individual Research in Marketing (1-5).**

**MKTG 599 Internship in Marketing (1-3).**

**MKTG 701 Marketing Management (2).** This course examines the marketing function of the firm, primarily from a managerial perspective. The topics examined include: marketing concepts, segmentation, and decisions related to positioning, products, pricing, distribution, and promotion, and promotion.

**MKTG 702 New Product Management (3).** The course is designed to develop an understanding for the need for a disciplined process of development, and to follow the different steps of opportunities, entry strategies, a formal product development. 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.”

**MKTG 916 Seminar in Optimization Theory (3).** This course provides an advanced survey of theories about organizations as entities, their properties, and major processes. Topics include structures, structural change, organizational forms, decentralization, effectiveness, adoption and diffusion processes, concepts and theories of processes, independence, 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 at least one undergraduate or M.B.A. level behavioral science course or consent of instructor. LEC

**MKTG 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, and 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

**MKTG 942 Human Resources Management Systems and 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, benefits, and job design. 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: MGMT 701 (BUS 701), MGMT 702 (BUS 702), and DSCI 701 (BUS 704). LEC

**MKTG 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: BE 917, DSCI 920, and DSCI 921, or equivalent courses, and doctoral student standing or consent of instructor. LEC

**MKTG 995 Doctoral Seminar in Business (1-2).** A variable-topic seminar open only to graduate students meeting the requirements established by faculty members offering the course. Prerequisite: Consent of instructor. LEC

**MKTG 999 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

**MKTG 999 Independent Study for Doctoral Students (1-5).** Individual study of selected current problems in the field of business management to be adapted to the special interests and objectives of the students and conducted through extensive reading and research. Students must submit written statement of proposed research 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

**MKTG 999 Doctoral Dissertation (1-12).** Individual research work. THE
MKTG 703 Consumer Behavior (3). 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. Topics include: environmental influences on the consumer’s evaluation, perception, information processing, attitude, purchasing processes, post-purchase evaluation and related theories. Not open to students with credit in BUS 638. Prerequisite: ACCT 702 (BUS 710) or MKTG 701 (BUS 711). LEC

MKTG 704 Marketing Research (3). This course can act either as a survey course for the graduate student interested in an introductory marketing research method 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 MKTG 415. Prerequisite: ACCT 702 (BUS 710) or MKTG 701 (BUS 711). LEC

MKTG 705 Marketing Communications (3). 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 - be it 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, with a view to the nature of the receiver and how information is processed, communications research, and the determination of communications budgets and objectives. Prerequisite: ACCT 702 (BUS 710) or MKTG 701 (BUS 711). LEC

MKTG 706 Strategic Marketing Planning and Decision Making (3). This course is a capstone marketing course designed around a strategic marketing planning approach with a clear emphasis upon how to do strategic analysis and planning. Methods for the strategic analysis of business units, 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 topics into a 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: ACCT 702 (BUS 710) or MKTG 701 (BUS 711). LEC

MKTG 707 Metrics and Statistics in Marketing Research (3). 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: MKTG 415 or ACCT 702 (BUS 710) or MKTG 701 (BUS 711). LEC

MKTG 708 Global Marketing (3). This course is designed to provide a set of conceptual and managerial tools to students for undertaking marketing of products and services on a global scale. The topics covered in the course include economic and financial dimensions in global marketing, social and cultural aspects of the global market environment, regional market characteristics, international trade theories, political and legal issues in global marketing. A significant portion of the course is devoted to the study of competitive analysis and competitive strategy for the global markets, marketing information systems, various strategies for segmenting global markets, organization, planning and control of global marketing, and marketing mix decisions (product, price, promotion, and distribution) in a global setting. Prerequisite: ACCT 702 (BUS 710) or MKTG 701 (BUS 711) or consent of instructor. LEC

MKTG 709 Sales Force Management (3). In many industries, the sales force is the primary vehicle for taking the product to market. The main objective of this course is to expose students to the concepts, tools, and techniques required to effectively manage this important function. Since the use of personal selling is generally more pronounced within industrial markets, this course will first 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

MKTG 710 Internet Marketing (3). The internet and digital technologies continue to profoundly impact all aspects of the marketing function. The broad objectives of this course are to better understand how digital technologies create value for customers and profits for companies. Special emphasis will be placed on new opportunities afforded by digital technologies. Specific topics include personalization, closed-loop marketing, online communities, new pricing formats, harnessing dispersed competence, and formulating win-win marketing strategies. Prerequisite: MKTG 701 (BUS 711). LEC

MKTG 711 Pricing Strategies and Tactics (3). In this course, students are first exposed to markets and pricing principles, not government pricing. After introducing pricing as an integral part of the marketing decision process, the course will develop an appreciation of the various tools (for example, consumer behavior and game theory) used to arrive at competitive pricing strategies. Cases will be used to illustrate both the tools and resulting strategies. Illustrative topics include: Value-based pricing, price matching guarantees, predatory pricing, behavioral pricing, interaction of pricing with channel decisions, bundling, and online auctions. While using various methods, care will be taken to differentiate long-term strategies and short-term tactics used by firms. Overall, students will be able to create effective pricing strategies and also understand how pricing policy fits into the overall marketing function of the organization. Prerequisite: MKTG 701 (BUS 711). LEC

MKTG 712 Services Marketing (3). Unique characteristics associated with services (e.g., intangibility, perishability, and real-time production) necessitate use of a different set of concepts, methods, and frameworks for their effective management. This broad course is designed to fill the knowledge-gap between managing products and managing services. Sample topics covered in this course include managing customer expectations, customer satisfaction measurement, managing service demand, mobilizing people for breakthrough service, managing service recovery, relationship marketing, customer lifetime value analysis, and managing services in a global context. Prerequisite: MKTG 701 (BUS 711). LEC

MKTG 713 Database Marketing (3). This course introduces the theory and practical implementation of customer relationship management (CRM) strategies using marketing databases. Topics include: fundamentals of CRM strategy, RFM analysis, LIY metrics, logit models, decision tress, techniques for evaluating model performance (e.g., lift charts, ROC) and applications to campaign management. In keeping with the hands-on nature of the course, students will be instructed on how to implement the CRM techniques using various software tools. Prerequisite: MKTG 704 (BUS 767). LEC

MKTG 895 Graduate Seminar in Marketing: (1-6). (V) Individual study. Open only to graduate students meeting the requirements established by faculty members offering the course. Prerequisite: Consent of Area Director. Enrollment restricted. LEC

MKTG 896 Independent Study for Masters Students (1-6). (V) Individual study of selected current problems in the field of business management to be adapted to the special interests and objectives of the students and conducted through extensive reading and research. Students must have at least a 3.0 grade point average and be in good academic standing in a graduate business program and must submit a written statement of the proposed project approved by a supervisory faculty member prior to enrollment. RSH

MKTG 995 Doctoral Seminar in Marketing: (2-5). A variable topic seminar open only to graduate students meeting the requirements established by faculty members offering the course. Prerequisite: Consent of instructor. LEC

MKTG 997 Directed Research in Marketing (1-5). Students will research selected 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

MKTG 998 Independent Study for Doctoral Students (1-5). Individual study of selected current problems in the field of business management to be adapted to the special interests and objectives of the students and conducted through extensive reading and research. 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

MKTG 999 Doctoral Dissertation (1-12). (V) Individual research work. THE
School of Education

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See pages 12-14 for admission procedures.

KU is noted for innovative research in learning disabilities, training of deaf children, special education services in rural areas, and the use of computers to teach children.

School of Education degree requirements are subject to change. Current information is available from department offices or online at www.soe.ku.edu.
Admission

Graduate programs in education are open to students with acceptable baccalaureate degrees, as specified by the admitting departments, whose academic records indicate that they 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.

See Admission in the General Information chapter of this catalog for more information.

Ordinarily, complete application materials should be received by July 1 for fall admission, December 1 for spring semester, and May 1 for 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.

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 these departments:

- **Curriculum and Teaching** includes programs in curriculum and instruction, including the fields relating to elementary and secondary education.
- **Educational Leadership and Policy Studies** comprises programs in educational administration, foundations, higher education, and policy studies.
- **Health, Sport, and Exercise Sciences** offers areas of study in exercise science, health science, pedagogy, and sports studies.
- **Psychology and Research in Education** offers programs in counseling psychology, school psychology, and educational psychology and research.

- **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 art 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.

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 student opportunities for assistantship, laboratory, and research experiences related to their programs of study. Contact the individual programs for information.

Applied Physiology Laboratory and Fitness Evaluation Clinic

This teaching and research laboratory in stress physiology, Robinson Center, 1301 Sunnyside Ave., Room 101, Lawrence, KS 66045-7567, assesses physical function through physiological tests. Fitness parameters of physical education majors and students in health, sport, and exercise sciences classes are assessed routinely. Demonstrations of physiological and biochemical concepts are performed for exercise physiology classes. Research on the physiological ramifications of exercise stress is conducted. Graduate and undergraduate students assist in service and research projects.

Beach Center on Disability

The Beach Center, Haworth Hall, 1200 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, 431 Joseph R. Pearson Hall, works to increase the economic literacy of pre-service and in-service teachers through credit and noncredit teaching and consultation in economic education. It maintains a library of current materials on economic/consumer education.

See Research and Academic Support, pages 41-52, for descriptions of research units at KU.

Application fees: Domestic students in education: paper $55, online $45.
International students in education: paper $60, online $55.
**Center for Educational Testing and Evaluation**  
The center, 735 Joseph R. Pearson Hall, engages in research and service in educational assessment and program evaluation. Issues in educational testing are studied and projects are designed and carried out to examine school effectiveness, 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**  
CPS, 130 Joseph R. Pearson Hall, is a training site for students in the Department of Psychology and Research in Education. CPS is staffed by student clinicians in school psychology and counseling psychology who earn credit while they gain practical experience working directly with clients. CPS is a self-sustaining, nonprofit agency.

**Center for Research on Learning**  
The center, 517 Joseph R. Pearson Hall, conducts research to enhance learning performance in school and nonschool settings. The center’s international network trains educators to use the products of its research. It serves as the parent organization for four research institutes: the Institute for Effective Instruction, the Division of Adult Studies, the Advanced Learning Technologies group, and the e-Learning Design Laboratory. See also the Research and Academic Support chapter of this catalog.

**Kinesiology/Biomechanics Laboratory**  
The laboratory, Robinson Center, 1301 Sunnyside Ave., Room 101, Lawrence, KS 66045-7567, analyzes human motion. The primary emphasis is on computer-aided cinematographical analysis, but other research tools such as electromyography (EMG), electrogoniometry, stroboscopy, and force plates are used. Major attention is given to the study of efficient movement techniques, equipment design, strength, flexibility, and body types.

**Learning Resource and Technology Center**  
The center, 110 Joseph R. Pearson Hall, serves faculty and students of the school and the public. Its resources include the Curricular Laboratory, professional books and journals, K-12 textbooks, curriculum guides and course outlines from school districts throughout the country, selected reference and reserve materials, and mediated instructional packages for pre-service and in-service teacher education. It supports teaching, research, and service involving educational applications of media and microcomputers. Teacher education students develop skills in operating media equipment and producing materials to support their teaching. A representative cross section of instructional equipment found in schools is available, along with emerging technologies used in distance learning and interactive video instruction. The center offers production support for instructional materials and research support for design, evaluation, use, and dissemination of instructional technology.

**Microcomputer Laboratories**  
Microcomputer laboratories in Joseph R. Pearson Hall and Robinson and Dole Centers prepare students to use computers in administrative, instructional, and research applications. The laboratories offer a range of equipment found in schools, including PC and Macintosh computers. Computers are networked to KU’s backbone and resources such as scanners, laser printers, CD-ROM, CD, and DVD players. The laboratories contain application, programming, data management, data analysis, and instructional software that can be used for all grade levels and disciplines.

**South Central Regional Technology in Education Consortia**  
SCR*TEC is one of six federally funded R*TEC’s with the mission of improving student performance by integrating advanced technologies into educational activities. It serves 6 million students and nearly 400,000 teachers in the five-state region. It addresses issues of learning through Web-based resources, tools, and activities for teachers and students. SCR*TEC is part of the Advanced Learning Technologies group, a division of the Center for Research on Learning.

**Special Education Clinical Programs**  
The Department of Special Education in Lawrence, Joseph R. Pearson Hall, 1122 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, applied behavioral science, social work, speech, music therapy, occupational therapy, and physical therapy offer a rich multidisciplinary opportunity for special education and other students.

**Master’s Degree Programs**  
Master’s degrees are granted on satisfactory completion of not less than one academic year, or its equivalent, of graduate study. The school provides three options for the master’s degree: the thesis option, the project option, and a minimum 36-graduate-credit-hour study option. At least 20 of the credit hours required for master’s programs must be in regular course work, as contrasted with independent study and similar enrollments. All master’s programs require a graduate class in research and evaluation methods, successfully completed during the first 12 hours. As part of the requirement for the degree, the candidate must pass a final oral or written examination. A candidate’s adviser and two additional members of the Graduate Faculty constitute the examining committee for the thesis or project options. The department prepares and evaluates the written examination for the credit-hour degree option.

To ensure continuity of progress and currency of knowledge, there is a seven-year time limit for completion of master’s degree requirements. The Graduate Division has the authority to grant a one-year extension for compelling reasons, on recommendation of the department/committee. If more than eight years are requested, the appropriate appeals body of the school considers petitions for further extensions and, where evidence of continuous progress, currency of knowledge, and other reasons are compelling, may grant further extensions.

**Note:** Because substantive and procedural differences exist among the programs, some may have more stringent policies on time extensions. Students should inquire about the specific policies in effect in the department or program in which they intend to study.

**Note:** To be eligible for the degree, the student must deposit signed title and acceptance pages and complete all other requirements before the due date for submission of degree candidate grades. Graduate Studies 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 Master’s Project (4 hours applicable to degree requirements). While enrolled, the candidate submits a research paper related to the teaching area to the adviser. Check with the department for specific course requirements for the 36-hour master’s degree option.
Master of Science
A candidate for the degree of Master of Science in Counseling Psychology earns a concentration in mental health counseling. A minimum of 30 credit hours is required for this degree, of which no fewer than 10 hours must be in the concentration. In most cases, additional credit hours are required.

Master of Science in Education
A candidate for the degree of Master of Science in Education selects one of the program areas as a concentration for graduate study. A minimum of 30 credit hours is required, of which no fewer than 10 hours must be in the concentration. Credit in Thesis or Master’s Project may not be included in these 10 hours. The candidate must elect course work in at least two graduate program areas outside the major concentration. Normally, these courses would be in the School of Education. The candidate must complete a thesis in the concentration (6 hours maximum credit applicable to degree requirements) or complete the nonthesis option by enrolling in Master’s Project (4 hours applicable to degree requirements). While enrolled, the candidate submits a research paper related to the specialization to the adviser. Check with the department for specific course requirements for the 36-hour master’s degree option.

Specialist in Education
The Specialist in Education program consists of two years of full-time graduate study (about 70 semester credit hours) followed by a third year of internship. Students completing the program are licensed for early childhood through grade 12 if they obtain 100 hours of applied experience with young children and their families in practica or internship.

Doctoral Degree Admission Policies
The application for admission to graduate studies and the Graduate Division of the School of Education for doctoral study must specify the major program area. Materials included with the application form usually consist of (1) 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 résumé of professional experience, and (6) scores from the verbal, quantitative, and writing sections of the Graduate Record Examination. Each department in the Graduate Division has determined the specific information required for admission. Contact the graduate adviser of the department that offers the major for instructions about completing the application for admission.

In general, applicants with 3.5 grade-point averages on a 4.0 scale for the first 30 graduate-level hours (e.g., master’s degree), scores of 500 on the verbal and quantitative sections of the GRE, and validated strengths on the additional indicators have been admitted as regular graduate students to doctoral programs. However, this profile is intended only as an example and should not be construed as a guarantee of admission to a doctoral program. Several programs have limited student admissions because of the need to balance faculty resources with the demands of maintaining high-quality teaching, scholarship, and professional service activities. Departments offering approved doctoral programs may recommend provisional admission of a student who has not met the criteria or prerequisites to do advanced graduate-level work. Provisional admission requires the satisfactory completion (e.g., with a 3.5 grade-point average) of 12 or more hours in regularly scheduled graduate courses, at least half of which must come from core areas. After the completion of the provisional program, the department recommends to the Graduate Division that the student (1) be transferred to regular status or (2) be allowed to continue for another 9 hours or (3) be dropped from the program.

Doctor of Education
The Doctor of Education, a professional degree primarily for practitioners in education, is awarded upon completion of three years of advanced training in both the theory and the practice of education. The Ed.D. is offered in curriculum and instruction, educational administration, higher education, and special education.

Advisory Committee
A student admitted to study for the Ed.D. is known as an aspirant for the degree until the comprehensive examination has been passed. After passing this examination, the student is known as a candidate for the degree.

Each student must have an advisory committee of at least three members of the Graduate Faculty. One member of the committee serves as the chair. The student meets with this committee before completing 12 hours of course work to plan and approve formally an appropriate program leading to the Ed.D. The approved program, signed by members of the committee and the student, is placed in the student’s file in the School of Education Graduate Division office.

Requirements
Students must acquaint themselves thoroughly with departmental requirements for the degree, which may be in addition to general requirements and those of the School of Education.

1. Time Limit. To ensure continuity of progress and currency of knowledge, doctoral degree students normally complete all requirements for the degree in eight years after first enrollment in a program leading directly to a doctoral degree. Except for the core requirement, course work submitted to complete doctoral degree requirements must be completed within school or departmental time limits or extensions thereto. The Graduate Division has the authority to grant a one-year extension of the normal eight-year time limit for compelling reasons, on the written advice of the dissertation committee. If more than nine years are requested, the appropriate appeals body of the school considers petitions for extensions and, where evidence of continuous progress, currency of knowledge, and other reasons are compelling, may grant further extensions. There is a 10-year limit on combined master’s and doctoral degree programs.

Note: Because substantive and procedural differences exist among the various programs, 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, 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 ses-

(sion 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 course work taken after the first year of graduate study, that is, after the master’s degree or its equivalent, may satisfy the period of continuous study requirement.

• Dissertation, individual study, field experience, and off-campus practicum hours may not be included in the stated minimal requirements.

• For all enrollments of 8 hours or more, one course may be taken away from the program’s home campus, e.g., on the KU Edwards Campus, if need can be demonstrated from a scheduling standpoint.

For options (b), (c), and (d), at least quarter-time, appropriately related, professional involvement on or off campus is required.

The period of continuous study is not merely a requirement measured in hours of enrollment or of credit in courses counted toward a degree, but may include other academic and professional activities appropriate to the field of study.

The student, with the help of the advisory committee, must file in the Graduate Division office a period of continuous study plan congruent with School of Education requirements before the beginning of the formal period of continuous study. This plan may be filed as a part of the overall program plan.

The period of continuous study requirement for the Ed.D. ensures a minimum period of bona fide on-campus study and related academic and professional involvement. 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 office.

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 student must be notified of the results in the School of Education Graduate Division office on the appropriate form so that they may be recorded on the student’s permanent record.

6. Doctoral Practicum Enrollment. Ed.D. aspirants must complete at least one structured 3-credit-hour practicum in a supervised internship setting. A description of the practicum prepared by the student and approved by the advisory committee must be filed with the department and the graduate records office. Specific requirements for this practicum experience are available from students’ departments.

7. Comprehensive Examination. The comprehensive examination should be scheduled after the student has completed the research skills requirements and all, or a major portion, of the course work for the concentration. The department must request the School of Education Graduate Division office to schedule the comprehensive examination. This request is to be made at least two weeks before the date of the written portion of the examination. The written portion 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 Studies representative and must be from a department other than the department of the concentration.

The student passes the comprehensive examination if a majority of the official examining committee (including the chair) approves the student’s performance. The grade on this examination is Honors, Satisfactory, or Unsatisfactory. If the aspirant fails the comprehensive examination, he or she may be allowed, upon the department’s recommendation, to repeat it, but it may not

For information about specific requirements for adding endorsements, contact the School of Education at (785) 864-3726.

Established in 1989, the Beach Center on Disability is the only federally funded center in the nation conducting research on families with members who have disabilities.
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 is to be a minimum of 16 hours. If a student passes the written component but fails the oral, the examining committee determines whether both components or only the oral must be repeated, after the minimal 90-day interim period.

**8. Dissertation Committee and Proposal.** Doctoral aspirants may begin work on the dissertation after they complete the equivalent of one full-time semester of doctoral study in regular student status and may use their research practicum experience in preparation for the dissertation. However, students may first enroll in dissertation credit hours only during the semester in which they take their comprehensive examinations. Dissertation hours taken during that semester count toward the minimum of 18 hours of dissertation credit only if the examinations are passed during that same semester.

Upon passing the comprehensive examination, the aspirant becomes a candidate for the Doctor of Education degree. Based on recommendations of the candidate’s department, the Graduate Division designates the candidate’s dissertation committee at this time. This committee must consist of at least three members (usually including the advisory committee) and may include members from other departments and, on occasion, from outside the university. All committee members are to be members of the Graduate Faculty. A committee member from outside the university becomes an ad hoc member of the Graduate Faculty.

The dissertation proposal 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 the appropriate form) to the School of Education Graduate Division office for deposit in the reserve section of the Learning Resource 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 general requirements.

**10. Dissertation.** The candidate must present a dissertation that exhibits the application of existing knowledge in the major field of professional study. Ed.D. candidates may satisfy the dissertation requirement by completing a comprehensive, critical assessment of the relevant literature on a major educational issue or problem. This study should demonstrate the application of existing knowledge to the author’s area of professional practice. Various styles and formats for theses and dissertations are acceptable. The format and style of a student’s thesis or dissertation is left to the discretion of the student and the 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. Although the dissertation committee is responsible for the certification of the candidate, any member of the Graduate Faculty may be present at the examination and may participate in the questioning.

The official examining committee consists of at least five members, including the dissertation committee. At least one member must be from a department other than the candidate’s major department. This member represents Graduate Studies.

The final examination must be partly oral and may be wholly so. The examination covers the dissertation and the concentration. The candidate passes the final examination if a majority of the official examining committee (including the chair) approves the candidate’s performance. When the final oral examination has been passed, the dissertation committee reports a grade of Honors, Satisfactory, or Unsatisfactory. 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, a title page and acceptance page with original signatures, along with appropriate fees, 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, through the electronic submission process found at www.graduate.ku.edu/~etd.

Doctor of Philosophy with a Major in Education

The Doctor of Philosophy degree is awarded for mastering a field of scholarship, learning the methods of investigation appropriate to that field, and completing a substantial piece of original research. The Ph.D. is offered in all education graduate programs. Although the courses and the research leading to the Ph.D. are necessarily specialized, the attainment of this degree should not be an isolated event in the enterprise of learning. The aspirant for the Ph.D. is expected to be a well-educated person and should have acquired a broad base of general knowledge, both as preparation for more advanced work and as a means of knowing how the concentration is related to other fields of human thought.

Advisory Committee

A student admitted to study for the Ph.D. is known as an aspirant for the degree until the comprehensive examination has been passed. After passing this examination, the student is known as a candidate for the degree.

Each student must have an advisory committee consisting of at least three members of the Graduate Faculty. One member of the committee serves as the chair. One member must be from the graduate department representing the student’s minor area. The student meets with this committee before completing 12 hours of course work to plan and approve formally an appropriate program leading to the Ph.D. The approved program, signed by members of the committee and the student, is placed in the student’s file in the School of Education Graduate Division office.

Requirements

Students must acquaint themselves thoroughly with departmental requirements for the degree, which may be in addition to general requirements and those of the School of Education.

1. Time Limit. To ensure continuity of progress and currency of knowledge, doctoral degree students normally complete all requirements for the degree in eight years after first enrollment in a program leading directly to a doctoral degree. Except for the core requirement, course work submitted to complete doctoral degree requirements must be completed within school or departmental time limits or extensions thereto. The Graduate Division has the authority to grant a one-year extension of the normal eight-year time limit for compelling reasons, on the written advice of the dissertation committee. If more than nine years are requested, the appropriate appeals body of the school considers petitions for extensions on a case-by-case basis. Evidence of continuous progress, currency of knowledge, and other reasons are compelling, may grant further extensions. There is a 10-year limit on combined master’s and doctoral degree programs. Note: Because substantive and procedural differences exist among the 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, to continue, must apply for readmission to the program and the Graduate Division.

2. Resident Study. The student must spend the equivalent of three academic years, including the time spent attaining the master’s degree, in resident study at this or another approved university. Because general requirements do not specify a minimum number of hours for the degree, no transfer of credits is appropriate. Departments do, however, consider relevant prior graduate work in setting up programs of study leading to the doctorate.

Residence Requirement. Two semesters (which may include one summer session), usually consecutive, at any time beginning with the first semester of doctoral study must be spent in resident study at KU. Residence is not merely a period measured in hours. During this period the student must be involved full time in academic pursuits, which may include up to half-time on-campus teaching or research, or under certain circumstances, a greater percentage of research if it is directed specifically toward the student’s degree objectives. Such activities permit commensurate decreases in the hourly enrollment minima. The student must continue to be enrolled in at least 6 hours under any special conditions. Increased research involvement must be fully supported and documented by the dissertation adviser as contributing to the student’s dissertation. The research work must be performed under the direct supervision of the student’s adviser, if on campus, or with adequate liaison, if off campus. Special circumstances such as internal employment for more than half time as a teaching or research assistant, or as another type of university employee, must have advance approval on an individual basis by petition to the Graduate Division of the School of Education. The student, with the 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.

Note: Hourly enrollment requirements must be met through courses at the program’s home campus, and if appropriate internal employment is not involved, at least 9 hours must be in regularly scheduled courses. Exception: One course each period may be taken away from the home campus, e.g., on the KU Edwards Campus, provided that scheduling needs can be demonstrated.

3. Program Area. In applying for doctoral study, the student specifies a program area in which formal classes and research work are to be done and in which she or he expects to become a scholar. An area must contain a minimum of 40 credit hours of course work and may include work completed for the master’s degree or its equivalent, provided it meets currency and relevancy criteria as determined by the advisory committee and the Graduate Division. Credit for the dissertation is part of the area. A student working for the Ph.D. specifies a minor outside the program in which the area is completed. The minor must contain at least 12 hours of courses, and it should be related to and supportive of the area. A minor including courses in more than one area may be allowed upon petition by the advisory committee to the Graduate Division. Upon admission to doctoral study, students who have not completed a research and evaluation methods course for the education master’s degree must take the course during the first doctoral enrollment. The course does not count toward any doctoral requirements.

4. Core Requirement. Doctoral students must have on their graduate record 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 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 expectation of a significant research skills component distinct from the dissertation but strongly supportive of it. The Ph.D. research skills requirement includes completion of at least 12 graduate hours representing at least two of the following areas relevant to the aspirant’s research: statistics, measurement and assessment, qualitative methods, historical and philosophical methods, or foreign language (a reading knowledge in one foreign language is equivalent to 6 hours of credit). Up to 6 hours may be waived using prior B-level or higher graduate course work. A statement concerning specific research skills should be secured from the student’s major department.

When the student has met the requirements for research skills, the committee chair must report this to the Graduate Division on the appropriate form, certifying that the student is prepared to proceed to the comprehensive oral examination. If a program requires research skills that are tested separately rather than integrally with the program, the completion of each requirement should be reported immediately to the Graduate Division so that it may be recorded on the student’s permanent record.

Some commonly used skills are listed under Research Skills, Doctor of Philosophy in the General Information chapter.

7. Comprehensive Examination. When a Ph.D. aspirant has completed the major portion of the course work at a satisfactory level and has completed the research skills requirement and all other departmental requirements prerequisite to the comprehensive examination, the department asks the School of Education Graduate Division office to schedule the comprehensive examination. This request is to be made at least two weeks before the date of the written portion of the examination. The written portion 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 Graduate Studies.

The comprehensive examination consists of both written and oral parts and covers the major and minor areas pursued by the student. The student passes the comprehensive examination if a majority of the official examining committee (including the chair) approves the student’s performance. The grade on this examination is Honors, Satisfactory, or Unsatisfactory. An aspirant who receives a grade of Unsatisfactory may be allowed, upon the recommendation of the department, to repeat it, but it may not be taken more than three times. The aspirant may not repeat the examination until at least 90 days have elapsed since the last unsuccessful attempt.

Note: Students in Ph.D. education programs must pass both written and oral components of the comprehensive examination. Satisfactory performance on the written component must be attained before the oral component may be attempted. To fail either component is to fail the examination. All five members of the student’s comprehensive examination committee are involved in the evaluation process. The written component of the comprehensive examination, like the oral, focuses on advanced knowledge in the major and any appropriate related areas, including the minor. To pass, the student must be evaluated as having responded satisfactorily to questions in both the major and minor areas. If a student fails either the major or the minor portion of the written comprehensive component, the examining committee determines if the entire written component of the examination, or only the failed portion(s), must be retaken. The entire written component lasts a minimum of 16 hours. If a student passes the written component but fails the oral, the examining committee determines if both components or only the oral must be repeated, after the minimal 90-day interim period.

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 the appropriate form) to the School of Education Graduate Division office for subsequent deposit in the reserve section of the Learning Resource Center.

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 stu-
dent and the adviser, but format and style options may be con- 
strained 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. Instruc-
tions regarding the proper form of the final document may be ob-
tained from the School of Education Graduate Division office.

11. Final Oral Examination. When the dissertation has been ten-
natively 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 de-
sired examination date. At least five months must elapse be-
tween the successful completion of the comprehensive exami-
nation 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 depart-
ment. This member represents Graduate Studies. Upon ap-
proval by the Graduate Division, the final oral examination is 
scheduled at the time and the place designated in the request 
and publicly announced. Although the dissertation committee 
is responsible for the certification of the candidate, any member 
of the Graduate Faculty may be present at the examination and 
may participate in the questioning.

The 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 ex-
amination 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 com-
mittee 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 mem-
bers of the dissertation committee, a title page and acceptance 
page with original signatures, along with appropriate fees, are to 
be delivered to the Graduate Division so that completion of de-
gree requirements may be officially certified. In addition, the can-
didate must arrange publication of the dissertation, through the 
electronic submission process found at www.graduate.ku.edu/~etd.

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 en-
dorsements to the teaching license. For information about adding 
endorsements, contact the School of Education at (785) 864-3726.

Curriculum and Teaching

Chair: Marc Mahlios
Joseph R. Pearson Hall, 1122 West Campus Rd., Room 321
Lawrence, KS 66045-3101, www.soe.ku.edu/ct, (785) 864-4435

Professors: Mahlios, McKnight
Professors Emeriti: Bushman, Capps, Erb, Hiner, LaShier,
Noyce, Ridgway, Schild, Smith, Sundbye, Swartz
Associate Professors: Barry, Crawford, Ellis, Friedman-Nimz,
Gay, Gonzalez-Bueno, Hamilton, Huffman, Markham, Nielsen,
O’Brien, Phipps, Rice, Rodriguez, White
Associate Professors Emeriti: Hughes, Richardson
Assistant Professors: Bradley, Hallman, Jorgensen, Massengill,
Peter, Thomas

Courtesy Assistant Professor: Surbaugh
Lecturer: Herrmann-Ginsberg

The department offers a broad range of professional programs 
curriculum and instruction. Students should contact the ap-
propriate 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.

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 pro-
grams leading to the Master of Arts (M.A.) with a major in edu-
cation 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 curriculum and instruction are for students who plan 
to teach at the college level or assume major leadership posi-
tions in schools. Academic concentrations are

• Foreign language education
• Language arts education
• Mathematics education
• Science education
• Social studies education
• Literacy education
• Teaching English as a second language
• Educational communications and technology
• Curriculum studies
• Gifted and talented education
• Economics education
• Graduate licensure program

Admission. In addition to general requirements for admission to 
graduate study in the School of Education, concentrations in cur-
rriculum and instruction require completion of an appropriate un-
dergraduate program and, in most instances, a teaching license.

Materials describing all curriculum and instruction pro-
grams 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 Application Pro-
cessing Center. When admission materials are processed, the 
student is assigned an adviser according to the student’s inter-

The Department of Teaching and Leadership (T&L) has been reorganized into the Department 
of Curriculum and Teaching (C&T) and the Department of Educational Leadership and Policy 
Studies (ELPS).

The secondary education doctoral program ranked 17th in the nation among public universities, 
according to U.S. News & World Report’s “America’s Best Graduate Schools” rankings for 2007.
Curriculum & Teaching

est. The deadline for doctoral applications is February 1 for fall semester admission. Deadlines for master’s applications are February 1 for summer or fall and October 15 for spring. Please check with the department; some programs have different deadlines. Each student should consult the assigned adviser during each enrollment and plan 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.

Submit your application online at www.graduated.ku.edu/GAPC. Send original transcripts of all college and university course work to

The University of Kansas
Graduate Application Processing Center
Strong Hall, 1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

Send all other supporting application materials to

The University of Kansas
Department of Curriculum and Teaching
Graduate Office, Strong Hall, 1122 West Campus Rd., Room 321
Lawrence, KS 66045-3101

Admission to Master’s Programs. Minimum requirements are a completed graduate application and one official transcript 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, one official transcript 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 requirements appropriate to the degree, are required for the Ph.D. and Ed.D. Specific descriptions of research options may be obtained from the department.

■ Curriculum and Teaching Courses

C&T 500 Student Teaching in: _____ (1-6).
C&T 501 Student Teaching Practicum in: ____ (1-6).
C&T 598 Special Course: ____ (1-5).
C&T 620 Teaching English as a Second Language/Bilingual Education (3).
C&T 621 Diagnosis and Remediation in Second Language Education (3).
C&T 622 Second Language Acquisition (3).
C&T 630 Understanding the Nature of Talent in Children and Youth (3).
C&T 631 Teaching for Talent Development (3).
C&T 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
C&T 709 Foundations of Curriculum and Instruction (3). Basic concepts and processes of curriculum and instruction, including theories, planning models, research for decision-making, current trends, research, and proposals for improvement. Curriculum and instruction. LEC

C&T 710 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, standard 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

C&T 711 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; selecting reading materials; methods for helping poor readers; literary dispositions; and appreciation; censorship; ethical literature; techniques for presenting literary selection in class. Wide reading among best of current and classical literature. LEC

C&T 712 Educators as Leaders (1). This course is designed to enhance the students’ background and experience from two perspectives: 1) from their teacher education preparation coursework; and 2) from their recently completed student teaching experience. Focus of the course will center on the following themes - how to continue to progress in the development of a teacher as leader and becoming adapted at planning and articulating curriculum and instruction for the classroom, school, and community. Prerequisite: Successful completion of student teaching. LEC

C&T 730 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: historical and political development of the field, etiology of exceptional 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 431, SPED 779, or equivalent introductory course on exceptional children and youth. LEC

C&T 732 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 to develop new curricula which enhance the abilities of all students. Prerequisite: C&T 630 or C&T 730 or equivalent course on exceptional children and youth. LEC

C&T 733 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 education plans through a variety of instructional alternatives. Arranged service delivery options are possible. Prerequisite: C&T 631, C&T 731, C&T 732, or equivalent course. FLD

C&T 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

C&T 738 Applied Research in the Classroom (3). This course is designed to facilitate the implementation and completion of an action research project during the internship experience. Prerequisite: Successful completion of student teaching. LEC

C&T 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 school setting, with level and subject area to be selected according to the teaching field. Prerequisite: C&T 500 and C&T 736 appropriate to the student’s teaching level and area, or equivalent. FLD

C&T 740 Foundations of Reading: Process, Theory, and Instruction (3). It is the purpose of this course to introduce students to the foundations of the reading process: cognitive development levels, education and political history of reading, reading and writing 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

C&T 741 Comprehension and Study Strategies for Use with Multiple Texts (3). It is the purpose of this course to examine research, theory, and practical application 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 strategies and their application at the K-12 levels. Prerequisite: C&T 740 or permission of the instructor. LEC

C&T 742 Language and Literature in the Reading Program (3). A study of linguistic and literary aspects of reading instruction, focusing on language and cognitive development, and interrelations as they relate to teaching. Emphasis will be on 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: C&T 740 or permission of instructor. LEC

C&T 743 Writing and Spelling Development and Instruction (3). A study of the research base on writing, spelling, speaking, and listening for teaching the language arts; an overview of development in writing and spelling, the writing and spelling processes, and instructional strategies for integrating the language arts. Prerequisite: Admission to a masters program within the School of Education, C&T 740 or permission of the instructor. LEC

C&T 744 Teaching Literature to Children (3). An opportunity to survey the broad range of books that are tailored 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

C&T 745 Reading and the English Language Learner (3). LEC

C&T 747 Reading and the English Language Learner (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, science, mathematics, art, music, home economics, industrial arts, business education, or physical education. Prerequisite: Admission to the Transition to Teaching Program. LEC

C&T 750 Connecting Research to Classroom Practice in Elementary Mathematics and Science (3). The primary purpose of this course is to examine current research on issues important to elementary mathematics and science programs. The course will explore issues important to the classroom practices of elementary mathematics and science teachers. Provides a broad background for understanding current issues related to elementary mathematics and science curriculum, instruction, and assessment. LEC

C&T 752 Teaching Mathematics in the Urban Middle/Secondary School (3). The purpose of this course is to help urban teachers plan, organize, teach, and assess mathematics learning in the middle and secondary grades. The Kansas Teaching Standards (in Professional Education and in Mathematics Teaching) identify the knowledge and abilities addressed in this course. The instructors designed the class sessions and learning tasks to enable participants to make progress toward achieving the Kansas Teaching Standards. It is the participant's responsibility to acquire the knowledge and abilities and to demonstrate the progress being made toward meeting the Standards. A mathematics teaching portfolio is the tool used to document progress toward achieving the Standards. Prerequisite: Admission to the Transition to Teaching Program or permission of instructor. LEC

C&T 753 Teaching Science in the Urban Middle/Secondary School (3). The purpose of this course is to help urban teachers plan, organize, teach, and assess science learning in the middle and secondary grades. The Kansas Teaching Standards (in Professional Education and in Science Teaching) identify the knowledge and abilities addressed in this course. The instructors designed the class sessions and learning tasks to enable participants to make progress toward achieving the Kansas Teaching Standards. It is the participant's responsibility to acquire the knowledge and abilities and to demonstrate the progress being made toward meeting the Standards. A science teaching portfolio is the tool used to document progress toward achieving the Standards. Prerequisite: Admission to the Transition to Teaching Program or permission of instructor. LEC

C&T 760 Modern Approaches to Elementary Social Studies (3). A study of the purpose, content, psychology, and materials and methods for teaching the social sciences in the elementary school. Emphasis on principles and procedures for combining the social studies with other areas of the curriculum in broad unit instruction. Prerequisite: Nine hours of Education including educational psychology. LEC

C&T 762 Modern Approaches to Middle/Secondary Social Studies (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 of the social studies and discipline specific curriculum standards; (2) a review of the major writings 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. Prerequisite: Nine hours of Education including educational psychology. LEC

C&T 763 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

C&T 764 Teaching Economics to Children (3). A critical analysis of the relationship between economics and a designated school subject selected from history, geography, or consumer education; a determination of the economic concepts that can be 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: C&T 763. LEC

C&T 770 Introduction to Computing in Education (3). This course introduces basic concepts of computer literacy, with particular emphasis on the uses of microcomputers 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 instructional support applications of computers including examples of related software, software evaluation techniques, and an overview of resources of educational computing. Students will acquire hands-on operating experience with microcomputers through scheduled laboratory periods. LEC

C&T 797 Special Project in: ____ (2). Implementation of the curriculum project planned in C&T 734 or C&T 735; implementation and assessment of the special project will occur during the internship. Prerequisite: C&T 734, C&T 735, and C&T 736. BST

C&T 798 Special Course: (1-5). A special course of study to meet current needs of education professionals—primarily for graduate students. LEC

C&T 800 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: C&T 709 or permission of instructor. LEC

C&T 801 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

C&T 802 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: C&T 709, admission to the Building Principal Certification program, or permission of instructor. LEC

C&T 803 Differentiating Curriculum and Instruction (3). This course is designed for educators interested in expanding curriculum and instruction to accommodate diverse learners in the classroom, K-12. Topics include: models, methods, and resources for differentiating curriculum and instruction, designing and modifying differentiated curriculum, evaluating student learning, and introducing students, parents and colleagues to differentiation. An evidence-based, practical course for teachers, administrators, and support personnel. Prerequisite: Admission to graduate school. LEC

C&T 804 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, career and life skills, and the role of the middle grades in a K-12 sequence will be emphasized. LEC

C&T 805 Planning Instruction and Instructional Strategies in Urban Settings (2). This course will prepare students to engage in instructional planning and to utilize instructional strategies for urban classrooms, with an emphasis on secondary and middle schools. Students will use various strategies and conceptual frames appropriate to the various disciplines to create lessons that will allow them to teach and learn in a controlled setting. Practice teaching will be undertaken in an urban setting, under the supervision of the instructor and other veteran teachers. Following the teaching experience, students will study and develop lesson plans around specific topics with relevant curricular materials. Students also will critically assess their teaching experiences, and develop plans for continuing improvement. FLD

C&T 806 Instructional Strategies and Models (3). Analysis of models of teaching which represent distinct orientations toward students and how they learn. The application of these models is complemented by the study of research evidence on effective teaching strategies. Prerequisite: C&T 709. LEC

C&T 807 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 stereotyped field experiences. These are a part of this course. LEC

Students seeking added endorsements for teaching licenses should consult an adviser in the appropriate department.

The Center for Economic Education increases the economic literacy of pre-service and in-service teachers through teaching and consultation in economic education.
C&T 809 Qualitative Research: Curriculum Inquiry (3). Curriculum Inquiry provides an opportunity to reflect, explore, understand, and broaden understandings of curriculum through examining the theories, methodologies, strategies, and design of qualitative research. This course is designed to develop a common understanding of the major elements of qualitative research, while offering each student an opportunity to examine research topics and methods of personal interest, with particular attention to curricular issues. The course also includes practical experience with various modes of data collection and analysis. LEC.

C&T 810 Creative Thinking and Learning (3). This course provides an opportunity to investigate the nature of the creative process in educational settings. The knowledge base for the course builds from foundations of creativity, principles and theories of identifying and enhancing creative production, and affective learner variables. The course blends class and laboratory work to build broad understanding of creativity, and features the application of theories and models of the origins and development of creativity to promoting creative thinking and learning among children, youth and adults. Participants learn about, apply, and adapt techniques for defining and identifying creative potential and for encouraging creative thinking in educational settings. Prerequisite: Admission to graduate school. LEC.

C&T 810 Problems in Language Arts Instruction (3). A study of present 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.

C&T 820 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: C&T 809, LEC.

C&T 821 Diagnosis and Remediation in Second Language Education (3). This course provides an overview of diagnostic techniques and instruments used to identify and remediate specific learning difficulties associated with normal second language development in the area of listening, speaking, reading, and writing. The course includes a review of research concerning assessment as it relates to error analysis in the second language context. Corequisite: C&T 820, LEC.

C&T 822 Second Language Acquisition (3). This course provides an intensive review of the theory and research base of second language acquisition. Particular attention is given to the influence of research trends in linguistics and psychology on second language education theory and practice. Current trends in second language education are examined in light of the historical theory base. Prerequisite: C&T 820, LEC.

C&T 823 Developing Intercultural Awareness in the Second Language Classroom (3). This course includes the study of the interrelationship of language and culture and the use of multicultural training techniques to develop cultural awareness and positive attitudes in the second language classroom. Emphasis is on the integration of culture in the second language curriculum. Prerequisite: C&T 820 or C&T 803, LEC.

C&T 824 Problems in Second Language Instruction (3). This course presents a study of the data and instructional settings at the level of the second language classroom. The course is designed to give particular attention to 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: C&T 820, LEC.

C&T 825 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 developing and maintaining positive working relationships with other professionals in the school setting. Prerequisite: C&T 820, C&T 821, and C&T 822 or C&T 824, FL D.

C&T 826 Language Analysis for Language Teachers (3). This course offers pre- and in-service teachers the basic foundations of language analysis necessary for the teaching of second/fourth languages. The course covers basic linguistic topics common to all human languages (grammatical, phonological, and semantic aspects) with the intent to help teachers understand and address common languages problems that students face when learning English as a second/fourth language. LEC.

C&T 833 Diagnosis and Remediation in Elementary Mathematics (3). Deals with techniques and materials to remediate specific simple learning difficulties in elementary mathematics. Includes research dealing with learning difficulties and error analysis in elementary mathematics. Prerequisite: C&T 733, LEC.

C&T 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: C&T 833, FLD.

C&T 840 Emergent Literacy and Beginning Reading (3). A study of emergent literacy through the beginning stages of literacy development. Course content focuses on the history, theory, and research that supports instructional reading practices for children Pre-kindergarten through grade 2. Prerequisite: C&T 740, C&T 743, C&T 741, and C&T 742, or permission of instructor. LEC.

C&T 842 Early Intervention in Reading 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: C&T 740, C&T 743, C&T 744, C&T 742, and C&T 745, or permission of instructor. FLD.

C&T 842 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 diagnosing and remediating reading difficulties, how to provide individual and group intervention strategies, communicate 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, C&T 740, C&T 743, C&T 741, and C&T 742, or permission of instructor. LEC.

C&T 843 Practicum for Students with Reading Disabilities: Pre-adolescent Through Adult (3). A case study approach to the treatment of pre-adolescent through adults with reading disabilities. Requires diagnostic testing of the learner, compilation of case study reports, and participating in staffing for the purpose of designing remedial reading programs. Students also participate in implementation of remedial programs with pre-adolescent through adults. Tutoring in either a clinical setting or a public school setting. Prerequisite: Admission to a masters program within the School of Education, C&T 740, C&T 743, C&T 741, C&T 742, and C&T 842. Prerequisite or permission of instructor. LEC.

C&T 844 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 school personnel, providing services, and public relations. Prerequisite: C&T 740, C&T 743, C&T 741, C&T 742, C&T 840, C&T 841, C&T 842, and C&T 843, LEC.

C&T 845 Reading Specialist Internship (1-2). Supervised and directed experiences to develop the necessary instructional and leadership competencies of a reading specialist. Activities will include district and building level needs assessment, data analysis, professional development of teachers and paraprofessionals, and cooperative planning with teachers and administrators around issues of literacy instruction and achievement. Prerequisite: Completion (at the University of Kansas) of course requirements for the Reading Specialist program. The Reading Specialist course requirements may be a part of a graduate degree. FLD.

C&T 851 Modern Approaches to Middle/Secondary School Mathematics (3). A study of aspects of curriculum and instruction in middle/secondary school mathematics programs, including research on teaching and learning mathematics. Prerequisite: Teaching experience in middle-level or high school mathematics or permission of instructor. LEC.

C&T 852 Instruction in Mathematics and Science (3). In this course, students will explore a variety of research-based instructional theories, models, and strategies for teaching and learning of mathematics and science. They will apply and evaluate the usage of one instructional strategy in an action research project in their classrooms. Prerequisite: C&T 709, LEC.

C&T 853 Connecting Research to Classroom Practice in Middle/Secondary Science (3). This course will explore current research on issues important to middle and high school science teachers so they can use research to support and improve their classroom practice. Prerequisite: Teaching experience in middle level or high school science or permission of instructor. LEC.

C&T 854 Assessment and Evaluation in Science and Mathematics (3). The primary purpose of this course is to examine assessment and evaluation in science and mathematics, including assessment of students, teachers, schools, and educational programs. The course will examine technical characteristics of various assessment methods including both traditional and alternative methods. In addition, the course will analyze and discuss various controversial issues in assessment such as authentic assessment, and large

The Department of Curriculum and Teaching offers a broad range of professional programs in curriculum and instruction.

At least 8 hours must be completed at KU if it is to be the recommending institution for adding endorsements to the teaching license.
C&T 872 Practicum in Educational Communications and Technology (1-3). Supervised practice in a medium of production, such as print, telecommunications, computer, and/or managing instructional materials. Prerequisite: C&T 770 and C&T 871. FLD

C&T 896 Seminar in: ___________ (1-4). LEC

C&T 897 Independent Study (1-4). Prerequisite: Consent of adviser and instructor. RSH

C&T 898 Master's Project (1-4). RSH

C&T 899 Master's Thesis (1-6). THM

C&T 901 Contemporary Research of Teaching Effectiveness (3). A review of recent research on the conceptualization, measurement, and improvement of teaching effectiveness. Prerequisite: Consent of instructor. LEAD

C&T 903 Curriculum Supervision (3). An intensive study of the theoretical and research bases for curriculum supervision and improvement. Topics include models and practices in supervision and staff development, skills and instruments used in curriculum assessment, coordination of both human and material resources, and the dynamics of change strategies. LEC

C&T 904 Philosophical Questions in Curriculum and Teaching (3). This course addresses philosophical questions pertaining to curriculum and teaching across a range of educational contexts. These questions center on epistemology, ethics, and the assumptions underlying alternative approaches to research in education. Students completing this course should be able to engage in philosophical inquiry and apply relevant philosophical literature and principles to the examination of curriculum and teaching. LEC

C&T 905 Teacher Education in the U.S. (2). A study of the development, issues, and programs for the preparation of teachers. Open to all regular graduate students. LEC

C&T 906 Qualitative and Curriculum Inquiry: Analysis and Interpretation (3). Support for novice researchers in extending their understanding of the theoretical frameworks underlying qualitative research, qualitative methodologies, the research process and its relationship with curriculum inquiry. During the course the student will discuss various forms of qualitative research methods, approaches to research, and perspectives in methodology relate to curriculum inquiry. We will explore the intertwining of data generation, analysis, and writing. In addition, we will focus on refining data generation techniques, strategies for data analysis, data interpretation, and various forms of reporting/writing. Prior coursework: Introduction to a graduate level qualitative research course or permission from the instructor. Prerequisite: Introduction to a graduate level qualitative research course or permission from the instructor. LEC

C&T 940 Evaluation of Research in Reading (3). LEC

C&T 951 Research and Evaluation in Mathematics and Science (3). This course introduces students to the processes of planning, conducting, and evaluating mathematics and science research and evaluation in education. This course emphasizes the methods and techniques used in both quantitative mathematics and science research and evaluation methodologies. Prerequisite: A PRE course in statistics. LEC

C&T 960 Theory and Research in Social Studies Education (3). The purpose of this graduate level course is to stimulate and communicate systematic research and thinking in Social Studies Education. Its purpose is to foster the creation and exchange of ideas and research findings that will expand knowledge about purposes, conditions, and effects of schooling and education about society and social relations. LEC

C&T 968 Readings in Economic Education Research (3). A survey of research in elementary, secondary, and higher education economic education. After initial, mutual readings, and discussions, class members will determine a list of broad research questions around which we will focus our readings. Each student is responsible for developing a reading list on one of the topics and reporting on selected readings. Class meetings will focus on summarizing and criticizing published research. Purpose of this course is to prepare doctoral students for comprehensive examinations and dissertation research. LEC

C&T 994 Advanced Topics: ___________ (1-3). A special course of study to meet current needs of education professionals — primarily for post-master’s level students. LEC

C&T 995 Field Experience in: ___________ (1-5). Supervised and directed experiences in selected educational settings. The adviser will schedule regular observations of the field experience and conduct regular meetings 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. FLD

C&T 996 College Teaching Experience in: ___________ (2). To meet the college teaching experience requirement for doctoral programs, a student shall engage in a semester-long placement in a classroom 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. LEC

C&T 997 Individual Study (1-4). Prerequisite: Prior graduate course work in the area of study and consent of instructor. RSH

C&T 998 Seminar in: ___________ (1-4). LEC

C&T 999 Doctoral Dissertation (1-15). THE

scale assessment, and large scale assessments, assessment for accountability, and equity issues. LEC

C&T 855 Curriculum in Science and Mathematics (1-3). A survey of the concepts and processes that provide the focus of modern science and mathematics curricula will be central to the course. Students develop a standards-based framework for a school science or mathematics program. The course includes an analysis of national and state recommendations for the reform of science and mathematics education in the context of our state and local educational systems, which is applied by evaluating exemplary instructional materials and activities appropriate for classroom use. Prerequisite: C&T 709. LEC

C&T 856 Practicum in Science Education (1-3). Intensive supervised experience working with improvement of science curriculum 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 science education and prior consent of practicum supervisor. FLD

C&T 857 Practicum in Mathematics Education (1-3). Intensive supervised experience working with improvement of mathematics curriculum 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

C&T 858 Connecting Research to Classroom Practice in Middle/Secondary Mathematics (3). This course will explore current research on issues important to middle and high school mathematics teachers so they can use research to support and improve their classroom practice. Prerequisite: Teaching experience in middle level or high school mathematics or permission of instructor. LEC

C&T 859 Issues in Science Education: ___________ (1-3). A study of issues in a particular area of mathematics or science education. The course may be repeated for different topics. Prerequisite: Admission to graduate study. LEC

C&T 860 Topics in Teaching and Learning Social Studies: ___________ (3). An examination of current topics and issues from social science perspectives. Special emphasis is given to recent formulations of one of the social sciences, such as anthropology, geography, political science, science technology and society, and these topics affect the conceptualization, measurement, and improvement of teaching effectiveness. Reflection and improvement of teaching. Prerequisite: Consent of instructor. LEAD

C&T 861 Curriculum and Assessment in Social Studies Programs K-12 (3). The purpose of the course is to offer preservice and practicing K-12 social studies educators the opportunity to develop an overview of the social studies education and of the social studies and discipline specific curriculum standards; (2) a review of the major curricular 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

C&T 862 Trends and Issues in Social Studies Instruction (3). A study of trends and issues relating to, and needed changes in the content, organization, emphasis, resources and equipment, methods, devices and evaluation in the social studies. Consideration of related problems such as achieving meaning and understanding, providing for individual differences, providing motivation, the cooperative as- signment and socialized recitation. Students will be permitted to concentrate on those problems of particular interest to them. Prerequisite: Nine hours of Educa- tion including educational psychology. LEC

C&T 863 Curriculum Development in Economic Education (3). Extension and application of economic concepts and theories through integration into the scope and sequence of the curriculum. The course will include design and field testing of a project that utilizes appropriate concepts, materials, community resources and techniques for integrating economics into the total curriculum. Prerequisite: C&T 709. LEC

C&T 864 International Issues in the K-12 Classroom (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 will need to confer with the instructor of record to determine which topic will be the current focus of the course. LEC

C&T 868 Connecting Research to Classroom Practice in Social Studies (3). The purpose of the course is to explore readings on effective practice and current re- search on issues important to social studies teachers. Knowledge gained from the explorations will be used to develop a plan and implementation procedures for improving classroom practice. Prerequisite: Teaching experience in social studies education or permission of the instructor. LEC

C&T 870 Educational Media Development (3). This course will explore: (1) educational media development from various theoretical and instructional view points; (2) the role of the media specialist (Print, Internet) 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. LEC

C&T 871 Design of Instructional Materials (3). Introduction to the systematic de- sign and production of instructional resources. Emphasizes the theories of instruc- tional design and mediated instruction. Utilizes various delivery systems, includ- ing printed, audio, video, and web-based media. Although the course is practically oriented, it includes theoretical readings designed to provide a princi- ple-led underpinning to instructional design. Prerequisite: C&T 770. LEC
Educational Leadership and Policy Studies

Chair: Susan Twombly
Joseph R. Pearson Hall, 1122 West Campus Rd., Room 421
Lawrence, KS 66045-3101, www.soe.ku.edu/elps, (785) 864-4458
Professors: Ginsberg, Hillesheim, Imber, Rury, Twombly, Wolf-Wendel
Professor Emeritus: Hiner
Courtesy Professors: Carlsen, Roney
Associate Professors: Aust, Bailey, Baker, Ebmeier
Assistant Professors: Kim, Lee, Ng, Saatcioglu
Assistant Professor: Neal, Tuttle

The department offers a broad range of professional programs in educational policy and leadership. Students should contact the appropriate program adviser for specific program requirements. For complete program information, contact the department or visit www.soe.ku.edu/elps.

Note: Degree requirements are subject to change. Prospective and current students should obtain the current degree requirements from the department.

Submit your application online at www.graduate.ku.edu/GAPC. Send original transcripts of all college and university coursework to

The University of Kansas
Graduate Application Processing Center
Strong Hall, 1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535
Send all other supporting application materials to

The University of Kansas
Department of Educational Leadership and Policy Studies
Joseph R. Pearson Hall, 1122 West Campus Rd., Room 421
Lawrence, KS 66045-3101

Programs
Graduate programs in educational leadership and policy studies 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 leadership and policy studies with concentrations in educational administration, foundations of education, higher education, and policy studies.

Admission. Applicants for all programs must submit the following materials:
1. Graduate application form.
2. One official transcript from each collegiate institution attended.
3. 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:

Economic Administration:
Summer: Master’s and doctoral applicants ............................................. March 1
Higher Education:
Fall: Master’s applicants, priority consideration ........................................ February 1
Fall: Master’s applicants, otherwise ......................................................... March 9
Fall: Doctoral applicants ................................................................. July 1
Spring: Doctoral applicants ............................................................... November 1
Summer: Doctoral applicants ............................................................... March 1
Foundations of Education:
Fall: Master’s and doctoral applicants ................................................... July 1
Spring: Master’s and doctoral applicants .............................................. November 1
Summer: Master’s and doctoral applicants ............................................. March 1
Policy Studies:
Fall: Doctoral applicants ................................................................. July 1
Spring: Doctoral applicants ............................................................... November 1
Summer: Doctoral applicants ............................................................... March 1

Master’s Degree Programs
The master’s program in educational administration prepares graduates for positions of public school leadership and licensure at the building level. The master’s program in higher education prepares graduates for entry-level positions in college and university settings. The master’s program in foundations of education is for school professionals and others who wish to study the history, philosophy, and sociology of education. Please refer to the appropriate program brochure or the Web site for information about requirements for each degree.

Doctoral Programs
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 policy studies. A general description of each concentration is given here. Request the appropriate program brochure or visit the Web site for specific information on courses and requirements for each area.

Educational Administration. The educational administration concentration prepares teachers and administrators for school district leadership roles. Studies stress fundamental fields of knowledge and educational policy development necessary for effective leadership of school districts. The Ed.D. leads to licensure at the district level. Students pursuing this concentration must take course work in the summer.

Foundations of Education. The foundations of education area features a broad examination of educational theory and its practical application on local, national, and international levels. Emphasis is placed on social, philosophical, historical, comparative, and interdisciplinary inquiry into the relationship between human aspirations and the aims and methods of education.

The Department of Educational Leadership and Policy Studies offers doctoral programs in educational administration, foundations of education, higher education, and policy studies.

The school’s microcomputer laboratories help prepare students to use microcomputers in administrative, instructional, and research applications.
Courses of study are flexible and reflect the particular needs and aspirations of each student.

Higher Education. The concentration in higher education provides current and prospective college or university staff members and administrators with theoretical and practical knowledge of higher education as a complex human activity. The program includes required and elective courses in the concentration, in a cognate area (Ph.D.), and in practicum or field research (Ed.D.).

Policy Studies. The education policy studies concentration features a multidisciplinary approach to policy analysis. Students prepare for roles as researchers, policy analysts, higher education faculty, and educational leaders through individualized programs. Each student takes courses from two or more of the other doctoral concentrations in the department and, depending on interest, other relevant courses in social sciences.

Basic and applied research skills, including statistics, research design, and related options appropriate to the degree, are required for the Ph.D. and Ed.D. Specific descriptions of research requirements may be obtained from the department. Candidates for the Ph.D. and Ed.D. must complete the School of Education doctoral core.

Educational Leadership and Policy Studies Courses

ELPS 550 Childhood and Youth in America (3).

ELPS 598 Special Course: (1-5).

ELPS 652 Research Staff Skill Enhancement and Administration (2-3).

ELPS 715 Understanding Research in Education (3). This course introduces the concepts and skills involved in understanding and analyzing research in education and related areas. The course provides an overview of basic, general knowledge of various research methodologies. Students should expect to study much of this material in greater depth through additional course work before being prepared to conduct independent research. However, this course should enhance their ability to locate, read, comprehend, and critically analyze research articles and reports. Topics in the course include qualitative and quantitative methods and designs, historical and descriptive research, and program evaluation. Prerequisite: Admission to graduate standing in the School of Education. LEC

ELPS 737 The Governance and Organization of Schools (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

ELPS 743 Foundations of Multicultural Education (3). This class provides students with an understanding of multicultural education as an instructional concept, educational reform, or a systemic process meant to ensure educational equity for all people, especially those who have been inadequately served and/or historically discriminated against because of their racial/ethnic or linguistic backgrounds, gender or sexual orientation, socio-economic status, and special needs. Students will examine how past theoretical approaches that inform the practice of multicultural education and explore the contribution of various social sciences to the field. LEC

ELPS 745 Sociology of Education (3). This course will provide an introduction to the sociology of education. This course is designed to fulfill the doctoral core requirement for social, historical and philosophical foundations of education. Specific topics will include: conflict over the purposes of education; how those purposes are-or are not-translated into actual classroom life; how educational systems have developed historically, how status, and more specifically race, class and gender relations, affect student experiences; and contemporary policy and reform movements. LEC

ELPS 750 Principalship (3). An introduction to the role, responsibilities, expectations, and major duties of elementary, middle, and high school building administrators. Students are presented typical problems faced by school administrators through simulations and role playing and are expected, through reflection and discussion, to develop viable solutions. LEC

ELPS 751 Educational Finance (3). A description and analysis of national, state, and local strategies for the financial support of education, utilizing social, economic, legal, and political frameworks. Particular attention to the principles of revenue production and distribution at the public school level, 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

ELPS 752 Education Law (3). A study of legal principles and issues affecting educational policy making and practice with emphasis on student and teacher rights, equity, and the administration of schools. Prerequisite: Admission to graduate study. LEC

ELPS 753 Introduction to Personnel Administration in Education (3). An overview of the theory and practice of personnel administration. The course focuses on the processes of recruitment, selection, training and development, evaluation, compensation, equal employment opportunity and collective bargaining. LEC

ELPS 754 Analysis of Administrative Problems (3). An introduction to various methods of problem identification; strategies of information gathering; schemes for the analysis of qualitative and quantitative data; models of problem resolution and decision making; and consultation methods when seeking audience judgments. Students will build basic computer, library, decision and communication skills useful in future administrative practice and subsequent coursework. LEC

ELPS 755 Human Resource Management (3). An overview of the theory and practice of personnel management, recruitment, selection, compensation, placement, and development of personnel in the school setting. LEC

ELPS 756 History of Educational Thought (3). An examination of the major ideas that have shaped practice in the schools. Emphasis is placed on assisting the student with the development of a coherent and consistent personal philosophy of education upon which administrative practice can be based. LEC

ELPS 757 Education in American Society (3). A study of the roles and goals of education in the United States, the interrelationships among schools and students, teachers, administrators, and parents, and the culture of schools. LEC

ELPS 764 Historical and Philosophical Perspectives on Urban Education (2). This course is intended to help students analyze urban schools and their place in society. It also will help them understand how the social structure affects these schools and the process of education. In particular, it will consider the ways city schools have reflected the pervasive inequality characteristic of American society in the past and at present, focusing on race/ethnicity, gender, and socio-economic status. LEC

The course will also examine the politics of education, the process of debate and conflict over means and ends in public policy that determines so much of what teachers and students can do in schools.

ELPS 770 History and Philosophy of Education (3). A comprehensive study of influential persons and movements in the development of educational thought. Eastern and Western, from ancient times to the present. Emphasis on those ideas and historical roots that are relevant to contemporary issues in teaching and school administration. LEC

ELPS 771 Philosophy of Education I (3). An analytic inquiry into basic philosophical positions and issues relevant to education. The difference between ELPS 770 and ELPS 771 is that the latter is topically arranged and does not necessarily follow a historical sequence; it normally proceeds by problems and schools of thought. LEC

ELPS 772 Philosophical Problems in Comparative Education (3). A study of significant philosophical problems encountered when comparing educational systems. Special emphasis on the implications of axiological analysis for educational theory and practice in different areas of the world. Relationships among the social sciences, philosophy, the international and cross-cultural venture in education. The importance of systematic value-theory in comparative research and international education. LEC

ELPS 773 School and Society in Comparative Education (3). Analysis of the role of social science in comparative education as perceived by different philosophies or schools of thought, such as Marxism, phenomenology, empiricism, pragmatism, and linguistic analysis. LEC

ELPS 774 Modern Educational Theorists (3). An in-depth study of prominent European thinkers who have contributed to educational theory and practice (e.g., Rousseau, Pestalozzi, Herbart, Froebel, Montessori, Nietzsche, Freud, Piaget, Ortega Gasset, etc.). Prerequisite: ELPS 770 or ELPS 771 is recommended. LEC

ELPS 775 History of Education and Culture in America (3). A study of the relation between education and culture in America from colonial times to the present. American schools are considered in the wider context of cultural and social change. LEC

ELPS 776 History of Childhood and Youth in America (3). An exploration of changing attitudes toward children and youth, their subjective experience, their impact on adults, and the conditions that shaped their development. Special attention will be given to the relationship between the changing nature of childhood as a social and cultural category and the development of the education profession. LEC

ELPS 798 Special Course: (1-5). A special course of study to meet current needs of educational professionals — preparation of graduate students. LEC

ELPS 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 selection criteria, building and environmental codes, cost factors, and the development of educational specifications. Designed for both building and central office level administrators. Prerequisite: Admission to graduate study. LEC

ELPS 851 Supervision of Student Teaching: (2). A study of the organization and functions of the student teaching programs. Emphasis is placed 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

ELPS 852 School Resource Management: (3). An examination of the sources and uses of fiscal resources in education including underlying concepts from economic theory, the impact of values on fiscal policy, state funding formulas, and school budgeting and accounting practices. LEC

ELPS 853 Staff Evaluation and Development: (3). An examination of current trends in personnel evaluation with a focus on clinical supervision and adult development. Students will participate in simulation exercises to develop skills in classroom observation, conferencing techniques, evaluation of teaching artifacts, and the construction of staff development plans. LEC

ELPS 854 The Student in Society: (3). A study of children and youth with particular emphasis on demographic characteristics of the population served by schools and implications of those characteristics for schools and schooling. LEC

ELPS 855 Teacher Evaluation: (3). Teacher Evaluation is based on clinical, empirical, and theoretical approaches related to effective teacher evaluation from the administrative perspective. It is intended to provide exposure to competencies essential to effective evaluation of teaching performance. Evaluation knowledge and skill are 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-anchored measurement of teaching behavior is emphasized. Opportunities for improved skills identification are identified with the assistance of video-taped diagnosis of conferencing behavior. Prerequisite: Two of the following: ELPS 750, ELPS 752, ELPS 753, or C&L 840. LEC

ELPS 856 Law and Special Education: (3). This course focuses on laws that apply to special education, including federal and state legal systems. Particularly in respect to special education, the constitutional and statutory provisions of federal and state law and the judicial decisions interpreting those laws are 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 ELPS 752. (Same as SPED 851.) Prerequisite: SPED 750 or permission of instructor. LEC

ELPS 857 Disabled Citizens, Public Policy, and Policy Analysis: (3). To train students to analyze public policy that affects disabled citizens, various models of analysis are brought to bear on federal policy (education, transportation, housing, institutions, recreation, 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

ELPS 858 Organizational, Public, and Disabled Citizens: (3). This course addresses the issues that professionals (educators, physicians, allied health providers, attorneys and others) and families of disabled people face in the context of public values and attitudes and rules of law. The issues include, without limitation, education, treatment and non-treatment. Not valid for core requirements in history and/or philosophy of education. (Same as SPED 853.) Prerequisite: SPED 750, SPED 851, SPED 852 or permission of instructor. LEC

ELPS 870 Philosophy of Education II: (3). An exploration of select areas in philosophy, such as the nature of education, 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: ELPS 770 or ELPS 771 is recommended. LEC

ELPS 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 interpret data. Additional topics include crafting qualitative research questions, ethics of fieldwork, and establishing the worthiness of data. Common traditions of qualitative methods employed in education and other related fields will be introduced. LEC

ELPS 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 student and administrator. LEC

ELPS 881 Seminar in Leadership: (3). The purpose of this seminar is to explore leadership in education, particularly higher education, from a variety of perspectives. Readings come from a variety of disciplinary perspectives, such as sociology, organizational management, political science, and psychology. We consider various kinds of leadership and analyze the leader from a symbolic perspective, as a manager of meaning and critical change agent. We then challenge ourselves to deconstruct our leadership realities with the help of several critical perspectives as we prepare to examine who the leaders are as well as who they will be, and need to, in the educational institution in order to provide the necessary leadership for its success. LEC

ELPS 882 Higher Education in the United States: (3). The purpose of the course is to acquaint students in higher education, and students from other areas who intend to work in the post-secondary setting, with the history, philosophy and development of higher education in the United States. The course includes: (1) the founding of Harvard to 1965; (2) dissent, disruption, and change, 1965-1979; and (3) the future and crucial issues, the 1980’s. European higher education and its early influence on higher education in the United States is also examined. LEC

ELPS 883 The College Student: (3). An examination of the factors affecting college students; impact of college on student behavior, changing attitudes, values, beliefs, and the implications of recent research on traditional and new students for instructional and administrative practices. LEC

ELPS 884 Research on College Students: (3). Examination of the American college student from societal, developmental, research, and institutional perspectives and to review the policy implications of these findings for college and university administrators and faculty. Topics include research and theory concerning the college student experience, the diversity of the student body, access and influences for institutional policy and practice, and formulation of individual philosophies and priorities applicable to working with college students. LEC

ELPS 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: ELPS 715 or equivalent. LEC

ELPS 893 Advanced Building Leadership Internship: (2). Supervised and directed experiences to enhance the necessary leadership skills of a building/district leaders. Activities will include building/district level resource assessment, data analysis, curriculum and program development, personnel management, budgeting, and budget administration, administration (leadership and professional standards), and cooperative planning with teachers and administrators around responsibilities of curriculum, instruction, resource management and student achievement. Prerequisite: Completion of (at the University of Kansas) of all certification program (M.S./Ed.D.) requirements for the building/district leadership license. FLD

ELPS 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

ELPS 896 Seminar in: (1-4). LEC

ELPS 897 Independent Study: (1-4). Prerequisite: Consent of adviser and instructor. IND

ELPS 898 Master's Project: (1-4). RSH

ELPS 899 Master's Thesis: (1-6). THE

ELPS 950 Educational Policy Making and Reform: (3). An analysis of patterns of influence, organizations, 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

ELPS 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

ELPS 952 School Finance: Policy and Practice: (3). The objective of this course is to provide basic financial knowledge and the skills needed for the management of 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. This 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 mechanistic of school funding in light of state policies. LEC

ELPS 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 policy 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: ELPS 753 or its equivalent. LEC

ELPS 954 Advanced Organizational Theory and Research in Administration: (3). A synthesis of current theoretical and developmental forms in organizational analysis. These are evaluated for applicability to administering educational organizations. LEC

ELPS 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 and management characteristics of college students and 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 expenditure and expenditure forecasting techniques. Prerequisite: ELPS 952. LEC

ELPS 956 District Leadership: (3). The focus of the course is the role of the public school district superintendent. Organized 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 re-
lations, 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 ad-
vanced study with the intention of completing requirements for district certifica-
tion. Some students will also find the field appealing as an area for dissertation re-
search. Prerequisite: Doctoral status in education administration or permission of
instructor. LEC

ELPS 957 Educational Policy, Ethics, and Law (3). Course focuses on use of legal
and moral reasoning in analysis of educational policy issues. Specific topics will
vary depending on interests of instructor and students and current controversy.
Examples of possible topics to be included: school desegregation, teacher collec-
tive bargaining, separation of church and school, equal educational opportunity.
Prerequisite: ELPS 752, equivalent, or consent of instructor. LEC

ELPS 958 American Educational Reform Movements: Past and Present (3). An
examination of the origin, nature, and consequences of educational reform in
the United States. The primary goal is to attain a balanced evaluation of current edu-
cational reform. LEC

ELPS 959 Organization and Administration of Services for Exceptional Children
(3). To aid administrators and prospective administrators responsible for organiz-
ing and administering programs of education for exceptional children; state and
federal guidelines and regulations, legal aspects and financing of special educa-
tion; planning a program, administering special services. (Same as SPED 971.) Pre-
 requisite: Nine hours of Education including educational psychology and SPED
725. LEC

ELPS 960 Specialist Project (1-4). RSH

ELPS 970 Theory and Research in Administration (3). A survey of the theoretical
and empirical literature in educational administration and the methods used to in-
vestigate these content areas. Major emphasis is devoted to developing research
skills applicable in practice and to the identification of possible generic topics suit-
able for future dissertation work. LEC

ELPS 971 Comparative Education (2). A factual, descriptive, and analytical study
of national systems of formal education, or schooling, as exemplified in contem-
porary 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 indi-
nual project basis. The difference between ELPS 971 and ELPS 772 is the philo-
sophical orientation of the latter. LEC

ELPS 972 Educational Problems in Latin America (3). Designed to meet the needs
of students majoring in Latin American studies or interested in the area. Develop-
ment of an awareness of the concept of cross-cultural confluence with Latin Amer-
ica 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

ELPS 980 Postsecondary Finance (3). This course is designed for advanced doc-
toral 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, pro-
gram duplication and funding; reenrollment and quality issues; the legislative role
in budget preparation; unified and comparative management systems (e.g., WICHE
and NCHE) and the impacts of federal contracting and student aid policies. LEC

ELPS 981 Higher Education Law (3). An overview of the developing law of higher
education, with emphasis on and analysis of employer-employee relationships,
student-faculty/administration relationships, and the impact of federal and state
regulation on these relationships. LEC

ELPS 982 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

ELPS 983 Curriculum Innovation in Higher Education (3). A study of contempo-
rary post-secondary curriculum with particular emphasis on the nature of curricu-
lum, the organization and structure of academic programs, the nature of change in
academic communities and exemplary innovative institutions. LEC

ELPS 984 Teacher Education in the United States (2). A study of the develop-
ment, issues, and programs for the preparation of teachers. Open to all regular
graduate students. LEC

ELPS 985 Evaluations of Programs in Higher Education (2). Nature, objectives,
and basic procedures of evaluation as applied to the various aspects of higher ed-
ucation. Open to all regular graduate students. LEC

ELPS 986 The Governance and Administration of Higher Education (3). A theory-
based course aimed at providing an understanding of the governance and admin-
istration of academic institutions — particularly universities. Emphasis is directed
toward an analysis of decision-making in these complex organizations. LEC

ELPS 993 Advanced District Leadership Internship (2). Supervised and directed
experiences to enhance the necessary leadership skills of a building/district lead-
ers. Activities will include building/district level resource assessment, data analy-
sis, professional development of teachers/principals (and district level profession-
als), and cooperative planning with teachers and administrators around responsi-
bilities of curriculum, instruction, resource management and student achieve-
ment. Prerequisite: Completion (at the University of Kansas) of all certification
programs (M.S., Ed.D.) requirements for the Building/District Leadership Li-
censed. FLD

ELPS 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

ELPS 995 Field Experience in: (1-5). Supervised and directed experiences
in selected educational settings. The adviser will schedule regular observations of
the field experience and conferences with the student. Written summaries and
evaluations of the field experience will be prepared independently by the student,
a representative of the cooperating agencies, and the adviser. Open only to ad-
vanced students. Field experience credit in any one semester may not exceed five
hours, and total credit may not exceed eight hours. FLD

ELPS 996 College Teaching Experience in: (3). To meet the college teaching
experience requirement for doctoral programs, a student shall engage in a semes-
ter-long, planned, instructional activity that shall include college classroom teach-
ing under supervision. Planning shall be done with the adviser and/or the mem-
ber of the faculty who will supervise the experience. The activity shall be done
under the supervision of a member of the University of Kansas faculty or by an
individual or individuals designated by the candidate’s committee. FLD

ELPS 997 Individual Study (1-4). Prerequisite: Prior graduate course work in the
area of study and consent of instructor. RSH

ELPS 998 Seminar in: (1-4). LEC

ELPS 999 Doctoral Dissertation (1-15). THE

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Health, Sport, and Exercise Sciences

Chair: Andrew C. Fry
Graduate Coordinator: James D. LaPoint
1301 Sunnyside Ave., Room 104
Lawrence, KS 66045-7567, www.soc.ku.edu/hses, (785) 864-0783
Professors: A. Fry, Lumpkin, Tennant
Professors Emeriti: Osness, Zebas
Associate Professors: M. Fry, Greene, King, LaPoint
Associate Professor Emeritus: Huntsinger
Assistant Professors: Akagi, Carr, Frederick, Gallagher, Shrager, Vardiman

Graduate work in health, sport, and exercise sciences includes an offering of courses leading to the Master of Science in Educa-
tion and the Doctor of Philosophy degrees. Entrance requirements include completion of an undergraduate program equiv-
alent to programs offered by the Department of Health, Sport, and Exercise Sciences at KU and admission to graduate studies
through the Graduate Division of the School of Education.

Submit your application online at www.graduate.ku.edu/GAPC.
Send original transcripts of all completed college and university
course work to

The University of Kansas
Graduate Application Processing Center
Strong Hall, 1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

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KU’s Student Recreation Fitness Center, www.recreation.ku.edu, features an indoor climbing
wall, gymnasia, a martial arts center, racquetball/squash courts, a walking track, and
facilities for basketball, badminton, handball, football, soccer, and rugby.
Research skills must be completed before the consistent with the student’s needs and the faculty’s expertise. This for graduate degrees from the department.

multivariate or nonparametric techniques.

two of the following three research skills: (1) reading knowl-
espective evidence of research skills. The Ph.D. requires competence in 
tical application techniques in a research problem are required 
involving the development of the physical education program. Prer
elaboratory, and legal ramifications that are raised by the various issues. There will be an in-
expressions and skills involved in understanding and analyzing resear
cepts and skills involved in understanding and analyzing resear
of Health, Sport, and Exercise Sciences. LEC

Send all other supporting application materials to
The University of Kansas
HSES Graduate Admissions, 1301 Sunnyside Ave., Room 104
Lawrence, KS 66045-7567

Master of Science in Education Programs
The Master of Science in Education is offered with emphases in exercise science, health science, pedagogy, and sports studies. The degree program requires 30 hours for the thesis option or 
36 hours for the nonthesis option.

All students must take the Graduate Record Examination to be considered for admission to either a thesis or a nonthesis master’s program. Students must score above 500 on both the verbal and quantitative sections and above 4.0 on the written analytica

Any admitted master’s student who does not have a minimum grade-point average of 3.0 but has at least a 2.75 or who has GRE scores below the requirement may be admitted on pro-

With the adviser, each student develops a course of study con-
sistent with the student’s needs and the faculty’s expertise. This includes doctoral core requirements, emphasis area courses in 
HSES, supportive courses outside of HSES, and a field experience.

Research Skills. Research skills must be completed before the aspirant is admitted to the comprehensive examinations.

Twelve hours of statistical methods and demonstration of statis-
tical application techniques in a research problem are required as evidence of research skills. The Ph.D. requires competence in 
two of the following three research skills: (1) reading knowl-
edge of a foreign language; (2) computer programming, analy-

Students should obtain specific instructions and guidelines for graduate degrees from the department.

Laboratories and Facilities
The department maintains excellent laboratories for student and faculty research, including biomechanics, motor develop-
ment/adaptive, and applied physiology.

Health, Sport, and Exercise Sciences Courses
HSES 500 Student Teaching in: ___ (14).
HSES 501 Seminar in Teaching Health and Physical Education (2).
HSES 502 Camp Leadership and Counseling (2).
HSES 515 Assessment of Motor Development and Motor Control of Exceptional Children (3).
HSES 528 Techniques of Athletic Training—I Lower Extremity (3).
HSES 529 Techniques of Athletic Training—II Upper Extremity (3).
HSES 558 Creative Movement and Dance Appreciation (3).
HSES 561 Organization and Administration of Athletic Training (2).
HSES 562 Athletic Training Practicum V (2).
HSES 563 Senior Capstone in Athletic Training (2).
HSES 564 Athletic Training Practicum VI (2).
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 640 Applied Sport and Performance Psychology (3).
HSES 654 Management and Treatment Techniques of Athletic Training (3).
HSES 656 Rehabilitation Techniques of Athletic Training (3).
HSES 658 Organization and Administration Techniques of Athletic Training (2).
HSES 670 Introduction to Biomechanics (3).
HSES 671 Applied Biomechanics (3).
HSES 672 Exercise Physiology (3).
HSES 673 Clinical Fitness Evaluation Techniques (3).
HSES 674 Exercise Biochemistry (3).
HSES 678 Introduction to Energy Balance and Weight Management (3).
HSES 680 Adaptive Physical Education and Recreation (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 educa-
tional conferences and workshops. Prerequisite: Sixty hours of college work. LEC
HSES 713 AIDS and STDs: 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 technique for preventing the spread of AIDS and STDS. The course will explore current issues with regard to a number of sexually transmitted diseases, but the major-
ity of the course will be devoted to acquired immune deficiency syndrome. In the study of AIDS, students will learn about the sociological, physiological, economic, spir-

The Department of Health, Sport, and Exercise Sciences offers the Master of Science in Education and Doctor of Philosophy degrees with emphases in exercise science, health science, pedagogy, and sports studies.
conduct independent research. However, this course should enhance their ability to locate, evaluate, and comprehend, and critically analyze research articles and reports.

Topics in the course include quantitative and qualitative methods and designs, historical and descriptive research, and program evaluation. (This course fulfills the requirements of the methods and techniques course at the master's level.) Prerequisite: Must be an admitted HSES graduate student. LEC

HSES 719 Tests and Measurements in Physical Education (3). A study of motor testing including tests, procedures, and analysis and interpretations of results. Areas to be included are sports skills, fitness, motor ability, perceptual-motor and anthropometric, and training 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 course focuses on the formulation of current legislative revisions in tax laws, lobbying efforts of professional organizations, and the application of current technology. Strategies for cutback management, economic analyses, funding sources, and contractual relationships are reviewed. Prerequisite: Six hours of ap proved 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 330 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 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 contemporary theories and practices in management of facilities that constitute the responsibilities of a 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 multi-purpose 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 motor skills, and funding the retarded. Prerequisite: Consent of the instructor. LEC

HSES 760 Perceptual Motor Dysfunction (2). A study of incidence, classification 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 772 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 Internship in Exercise Science (6). A supervised internship experience in an approved exercise science setting. Students will gain experience through a hands-on approach via clinical and/or research settings. The specific type of internship experience will be agreed upon by the student and their academic advisor. Prerequisite: At least 24 graduate credit hours. 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, stress responses, 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 Re-examination and Assessment (1). The course is designed to re-examine the concepts and methods involved in the determination of health needs and the planning of appropriate programs designed to improve health status in the school and community setting. Specific areas to be included are: the effectiveness of current health education techniques; health education needs assessment; health hazard appraisals and risk reduction projects; the use of computers in health assessment; the development of inventories for determination of health needs; the planning of appropriate health education programs; procurement and fund raising; and basic evaluation and accountability in health planning. Prerequisite: Six credit hours of community or school health education. LEC

HSES 777 Practicum in Health Education and Wellness Promotion (1-3). This course is designed to provide practical community health experiences in health education and wellness promotion, including: assessment, planning, implementation, and program evaluation of the interventions. Students will choose their practicum focus in any of the ten content areas of health: mental and emotional, family living, growth and development, nutrition, personal health, alcohol and other drug abuse, injury prevention and safety, consumer health and environmental health. Prerequisite: Enrolled in graduate school and consent of the instructor. LAB

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 response of the respiratory system to stresses such as exercise, hypoxia, and pulmonary disease will also be discussed. (Same as BIOL 778.) Prerequisit e: BIOL 371. LEC

HSES 779 Physiology of Functional Aging (3). The course has been designed to address issues and concepts relating to the biological aging process as a foundation for physical performance, general fitness, and health status. The biological concepts will be applied to the human physiological aging process and the systems elating to the biological aging process as a foundation for physical performance, general fitness, and health status. The biological concepts will be applied to the human physiological aging process and the systems

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 and sports. LAB

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 appropriate school setting. LEC

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, and the integration of philosophical and ethical ideals into program planning and implementation. LEC

HSES 798 Special Course: (1-5). A special course of in-depth study exploring current needs and issues 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 Sport Facilities (3). The purpose of this course is to study current developments and trends in the financing, programming, design, and construction of facilities for intercollegiate athletics. Admission to graduate school. A course in the administration/management of sport or consent of the instructor. LEC

HSES 802 Injury Prevention in Exercise and Sport (3). A course designed to exp lain 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 developing 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 behavior 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 such as respiration, circulation, metabolism, strength, neuromuscular function, cardiac function, and body composition. Special emphasis will be placed on laboratory techniques of assessing physical fitness. Prerequisite: A course in exercise physiology. LEC

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 a sense of meaningful activity. Prerequisite: Two courses in health education or consent of instructor. LEC

HSES 807 Current Literature in Exercise Physiology (2). A wide range of topics from the exercise physiology literature will be discussed. Instructor and students will provide reports to the group on significant and timely developments 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). This course will examine the mechanical and neurological bases of human movement, and the factors that affect the control of movement. The course will also consider the impact of biomechanical principles on the prevention and rehabilitation of musculoskeletal injuries. Prerequisite: Courses in calculus, physics, anatomy, and bio-mechanics, or consent of instructor. LEC.

HSES 809 Laboratory Experiences in Biomechanics (3). This course will examine the instrumentation and techniques used in the collection and analysis of data acquired in biomechanics. Instrumentation used for three-dimensional analysis of human movement will be covered, such as motion capture systems, force measurement devices, electromyography, and isokinetic dynamometry. In addition, students will learn computer programs used to analyze data and generate biomechanical models. Instructor: One course in biomechanics, or consent of instructor. 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 are also 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 certain key 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 hear to critically analyze the growth of the field, the implications of their research, and the potential for future opportunities. Prerequisite: Consent of instructor. LEC.

HSES 813 Motor Control of Human Movement (3). This course will examine the neurophysiological basis of movement as well as the basic principles of the control of human voluntary movement. Students will learn not only how to look at the individual but also the task and the environment to fully understand the factors affecting the control of movement across the life span and in movement disorders. Students will be shown how to apply the principles of motor control in a variety of contexts, including teaching, coaching, rehabilitation science, and human factors engineering. Prerequisite: Consent of instructor. LEC.

HSES 814 The Implementation of Health Education Programs (3). The content of this course is designed to assist elementary and secondary school personnel with the implementation of health education programs. Specific topics to be discussed will 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: Consent of instructor. 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 developmental milestones 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 implementing health programs. Prerequisite: A course in community health or consent of instructor. LEC.

HSES 817 Clinical Evaluation, Exercise Prescription, and Electrocardiography (3). This course is designed to review clinical evaluation techniques including diagnostic examination, the use of the phlebotomy technique for obtaining laboratory for blood, and the principles of interpreting the electrocardiogram and the fundamentals of electrocardiogram analysis. Students will be able to apply their knowledge to clinical situations. This 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, or consent of instructor. 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. Prerequisite: Consent 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 sport. Prerequisite: Courses in research in physical education and sport. The course will apply principles of program development 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 interest in the design, critique, and writing of original research in Health, Sport, and Exercise Sciences. LEC.

HSES 823 Behavior Modification in Health and Exercise (3). This course will examine the behavioral principles that influence health and exercise practices. Theories of human behavior, reinforcement theory, and models of self-esteem will serve as the foundation for studying behavior change. Society influences will be strongly emphasized. Course topics will include exercise determinants, motivation, media representations, positive and negative influences, social support, and the behavior change process. Prerequisite: Admission to graduate school or consent of instructor. 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 disease. Prerequisite: Consent of instructor. LEC.

HSES 825 Skeletal Muscle Physiology (3). This course will provide the student with a solid foundation in the structure and function of the musculoskeletal system, and neuromuscular system as it relates to the skeletal musculature. Structure and Development - muscle fiber, motor neuron, neuromuscular junction, muscle receptors. Formation and Function of Muscle Innervation. Special topics to be covered include: Work - ion channels, pumps, and binding proteins, axoplasmic transport, resting and action potentials, neuromuscular transmission, muscle contraction, motor units, exercise, muscle metabolism. The Adaptable Neuromuscular System - fatigue, loss of muscle innervation, recovery of muscle innervation, neurotoxism, disuse, muscle training, injury and repair. Prerequisite: HSES 810 or equivalent. LEC.

HSES 826 Sport Finance (3). A study of the principles and applications of finance and economics in the sport industry. Strategic financial planning as a part of management responsibilities is highlighted. Prerequisite: Admission to graduate school. LEC.

HSES 830 Socio-cultural Dimensions of Sport (3). Current literature concerning the impact of American social values and cultural patterns of sport and physical activity on chronic disease. Prerequisite: A course in physical education curriculum, or equivalent. LEC.

HSES 831 Ethics in the Sport Industry (3). A study of the history, theory, models, and practical impacts of ethics in the sport industry. Prerequisite: 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 discuss evaluation techniques for physical education curricula and programs. Prerequisite: 15 hours of physical education. LEC.

HSES 833 Public Health Aspects of Exercise (3). This course describes the time line for physiologic adaptations to long-term physical activity. It describes, from a population perspective, 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 for energy intake regulation, and the role of exercise in weight management (increase/decrease) with emphasis on weight loss. Prerequisite: 12 hours of HSES courses, or equivalent, or consent of instructor. LEC.

HSES 835 Physical Education Curriculum Models (3). An examination of the elementary, secondary, and post-secondary institution, 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 post-secondary professional preparation curriculum and teaching programs. Prerequisite: A course in physical education curriculum, or equivalent. LEC.

HSES 836 Administration of Recreational Sports Programs (2). Organization and management theory and techniques for administering intramural sports programs in community settings. Philosophy of leadership, administration, evaluation, 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 837 Professional Development (3). This course will examine the current status of professional development for the practitioner in the field of health, sport, and exercise sciences. The courses will include the following topics: (1) contemporary trends in health, sport, and exercise sciences; (2) professional growth and development; (3) planning, organizing, and implementing professional development activities; and (4) assessment of professional development. Prerequisite: A course in health, sport, and exercise sciences. LEC.
HSES 840 Sport Administration (3). Organization and management theory and techniques related to mass intercollegiate and intramural sport and recreation administrations are considered in this course. Knowledge, leadership, communications, public relations, marketing, ethical and legal issues, finances and facilities are also studied.

Prerequisite: Admission to graduate school. A course in the administration/management of sport or consent of the 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 for selecting the appropriate marketing strategy, significance of sports marketing, preparing a marketing plan, and becoming familiar with the resources available on the Internet in the marketing area. Prerequisite: Admission 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 865 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 and examine the latest trends in elementary and secondary school physical education. Games, activities, dances, and rhythms will be presented and discussed relative to developmental levels of students grades K-12. Prerequisite: A methods course in teaching physical education or consent of instructor. LEC

HSES 872 Exercise and the Cardiovascular System (3). This course will be a discussion of various concepts specifically related to exercise and the cardiovascular system. By the end of the semester, the student should be able to demonstrate an understanding of the interaction of exercise and cardiovascular system by achieving satisfactory evaluations on examinations, abstracts, and classroom presentations. The following topics will be discussed as they relate specifically to exercise: homeostasis and cardiovascular transport mechanisms, basic structure and function; characteristics of cardiac cells; the heart as a pump; the peripheral vascular system; vascular control; venous return and cardiac output; regulation of arterial pressure; cardiovascular responses to stress; and cardiovascular function in pathological situations. Prerequisite: Consent of instructor. LEC

HSES 890 Seminar in HSES (3). This course is designed to provide a general research seminar learning experience for graduate students in HSES. In particular, students will learn about faculty research activities and interests from a variety of specialty areas both within the School and outside faculty and guest presentations. Students will be exposed to a variety of design and methodologies used to conduct research in the specialty areas of HSES. LEC

HSES 892 Psychological Foundations of Sport and Physical Activity (3). This course is designed to teach psychological components of sport performance to the practitioner. Issues related to stress, concentration, self-efficacy, communications, mental rehearsal, team cohesion, etc. will be explored as each relates to performance outcome. The integration of exercise physiology and biomechanics with sport psychology will be emphasized so that 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). THE

HSES 905 Advanced Concepts in Health Education (3). This course is designed as an in-depth study of the pedagogy of health education. It is concerned with the effects of various health education models, new materials, and innovative teaching techniques. The effectiveness of various media such as films, slides, computers, and other electronic devices, microcomputers, and assessment tools will be analyzed. Research concerning innovations in education will be investigated along with a study of future trends in the field. Timely issues of controversy about health education practices and the effectiveness of values clarification techniques are considered in this course. Philosophy, leadership, communications, public relations, marketing, ethical and legal issues, finances and facilities are also studied.

Prerequisite: Admission to graduate school. A course in the administration/management of sport or consent of the instructor. LEC

HSES 909 Administration Literature in Physical Education (3). Analysis of research studies completed in physical education administration. Findings reported in the literature concerning administrative research in physical education will be discussed. Prerequisite: Graduate level courses in education administration and administration of physical education. LEC

HSES 910 Biochemistry of Exercise (3). This course will include an in-depth examination of metabolic and endocrine principles as they relate to physical exercise and training. Specific topics will include: substrate utilization in exercise, muscle biochemistry, body composition, nutritional aspects and hormonal influences in exercise. Both instructor and students will report on the most current literature relating to the topics. Prerequisite: Human biochemistry or a course in biochemistry. LEC

HSES 926 Grant and Research Proposal Writing (3). This is a course for students to examine the sources and areas which provide financial support for research projects. The areas of study include types of research funding available on a local, state, and federal level, the elements and design of writing a proposal and strategies for obtaining funding. Prerequisite: Graduate level courses in education administration and administration of physical education. 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: ______ (3). To meet the college teaching requirement for doctoral programs, a student shall engage in a semester long, planned, instructional activity that shall include college classroom teaching under supervision. Planning shall be done with the adviser and/or member of the faculty who will supervise the experience. The activity shall be done under the supervision of a member of the University of Kansas faculty or by an individual or individuals designated by the candidate’s committee. FLD

HSES 997 Individual Study (1-4). Course graded on a satisfactory/fail basis. Prerequisite: Prior graduate course work in the area of study and consent of instructor. RSH

HSES 998 Professional Seminar (3). This seminar based course will be designed to prepare the doctoral student for academic careers or careers in industry after they graduate. The topics covered will be promotion and tenure procedures and expectations, including but not limited to teaching, research and service expectations at research intensive institutions, regionally comprehensive institutions and small liberal arts colleges. Industry career options will be discussed and guest speakers from various disciplines will be brought in to discuss options and expectations with this career path. Prerequisite: Doctoral student or permission of the instructor. LEC

HSES 999 Doctoral Dissertation (1-15). THE

Music Education and Music Therapy

See the School of Fine Arts chapter of this catalog.

The Center for Psychosocial Services is staffed by student clinicians in school psychology and counseling psychology who earn credit while they gain practical experience working directly with clients.
Psychology and Research in Education

Chair: Karen D. Multon
Joseph R. Pearson Hall, 1122 West Campus Rd., Room 621
Lawrence, KS 66045-3101, www.soe.ku.edu/PRE
Admissions Clerk: Loretta Warren, preadmit@ku.edu,
621 J.R. Pearson, (785) 864-3931
Professors: Harrington, Kerr, Krieshok, Lee, Lichtenberg, Multon,
Poggio, Salkind
Research Professor: Glasnapp
Professors Emeriti: Borgers, Fine, Heck, Hohn, Johnson,
McDermott, Price, Tracy
Associate Professors: Frey, Kingston, Lopez, Lowe
Assistant Professors: Eagle, Hansen, Patterson, Peyton,
Skorupski, Welch

The Department of Psychology and Research in Education offers graduate training programs in counseling psychology, educational psychology, and research and school psychology.

Note: The department may change its graduate studies requirements and expectations. Prospective and current students should obtain the current degree requirements from the department.

Submit your application online at www.graduate.ku.edu/GAPC.

Send one copy of all original transcripts to The University of Kansas
Graduate Application Processing Center
Strong Hall, 1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535
Send the PRE departmental application and all other requested supporting application materials to The University of Kansas
Department of Psychology and Research in Education
Joseph R. Pearson Hall, 1122 West Campus Rd., Room 621
Lawrence, KS 66045-3101

Prerequisites for Regular Admission

Prerequisites include:
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
5. Letter of intent
6. GRE (general test) scores: Institution code of R6871, Department code of 2005
7. Three letters of recommendation from people who can assess the applicant’s competency deficiencies
8. If the applicant has completed a practicum in counseling or a related area, one recommendation should be completed by the practicum supervisor

At the first enrollment, a doctoral student reviews any previous graduate work with an adviser to identify any course work in which the student is deficient. Students holding master’s degrees in other areas should recognize that such course work may require up to a year to complete and, in some instances, must be taken before the actual doctoral course requirements.

Counseling Psychology Programs

Degrees offered include the Master of Science in counseling psychology (mental health concentration) and Doctor of Philosophy in counseling psychology.

M.S. in Counseling Psychology

Training Director: Karen D. Multon, kmultan@ku.edu,
621 J.R. Pearson, (785) 864-3931

For the M.S. degree, students earn a concentration in mental health counseling.

Admission. The admission deadline is January 15 to begin course work in the following summer or fall.

Required Admission Materials:
1. Graduate Application Form, www.graduate.ku.edu/GAPC, and application fee. See Admissions in the General Information chapter of this catalog.
3. One copy of official transcripts of all previous college work, sent directly to the Graduate Application Processing Center. The original transcript is forwarded to the School of Education to complete licensing and/or certification paperwork.
4. GRE (general test) scores: Institution code of R6871, Department code of 2005.
5. Letter of intent.
6. Resume.
7. Three letters of recommendation from people who can assess the applicant’s prospects for completing the program.

Program Requirements. The mental health concentration requires about 40 to 44 credit hours of course work. Individuals wishing to become licensed professional counselors in Kansas need to meet additional requirements, described online at www.ksbrr.org. You also may wish to consult the American Counseling Association’s Web site, www.counseling.org, for additional information. Besides a core of work in counseling psychology (including counseling theory, career development, interviewing, assessment, group counseling, professional issues, and practicum), work is required in developmental psychology, research, and diagnosis and psychopathology. All students complete either a thesis, a research project, or a comprehensive examination. After entering the program, students should meet with an advisor to plan a schedule for completing degree requirements.

Students in the Kansas City area may complete a portion of the work on the KU Edwards Campus in Overland Park.

Ph.D. in Counseling Psychology

Training Director: Thomas Krieshok, tkrieshok@ku.edu,
621 J.R. Pearson, (785) 864-3931

Admission. The admission deadline is January 15 to begin course work in the following summer or fall.

Required Admission Materials:
1. Graduate Application Form, www.graduate.ku.edu/GAPC, and application fee. See Admissions in the General Information chapter of this catalog.
3. One copy of official transcripts of all previous college work, sent directly to the Graduate Application Processing Center. The original transcript is forwarded to the School of Education to complete licensing and/or certification paperwork.
4. GRE (general test) scores: Institution code of R6871, Department code of 2005.
5. Letter of intent.
6. Resume.
7. Three letters of recommendation from people who can assess the applicant’s prospects for completing the program.

Additional Admission Materials:
8. If the applicant has completed a practicum in counseling or a related area, one recommendation should be completed by the practicum supervisor.

A practicum form is included in the PRE departmental application.

Review of Graduate Status. At the beginning of each fall semester, the department formally evaluates the progress and status of all students in the program.

Course Work Requirements. In addition to any background competency deficiencies, each student must complete the fol-
lowing 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 requirements for the doctoral degree program. Course equivalencies that have been met during the student’s master’s program can be waived as required doctoral course work.

1. **Biological Bases of Behavior.** Select one:
   - PSYC 864 Clinical Neuropsychology
   - PSYC 961 Biological Foundations of Psychopathology

2. **Cognitive/Affective Bases of Behavior.** Select one:
   - PSYC 723 Advanced Cognitive Psychology
   - PSYC 757 Theories of Perception
   - PRE 807 Theories and Research in Human Learning
   - PSYC 831 Advanced Human Learning and Memory

3. **Social Bases of Behavior.** Select one:
   - PSYC 724 Advanced Social Psychology I
   - PSYC 725 Advanced Social Psychology II
   - PSYC 777 Social Psychology: Theory, Research, and Clinical Applications

4. **Individual Bases of Behavior.** Select one:
   - PSYC 960 Advanced Psychopharmacology
   - PRE 890 Diagnosis and Psychopathology

5. **History and Systems of Psychology**
   - PSYC 805 History of Psychology

**Professional Core**

1. **Counseling Theory and Practice**
   - PRE 740 Counseling and Interviewing Skills
   - PRE 742 Counseling Theory and Techniques
   - PRE 842 Counseling Practicum
   - PRE 843 Theory of Group Counseling
   - PRE 846 Career Development
   - PRE 875 Cross Cultural Counseling
   - PRE 880 Legal, Ethical, and Professional Issues in Counseling
   - PRE 918 Seminar in Current Issues and Trends in Counseling Psychology
   - PRE 945 Supervision in Counseling
   - PRE 948 Advanced Practicum I
   - PRE 949 Advanced Practicum II (two semesters)
   - PRE 952 Advanced Counseling Theory and Research
   - PRE 954 Vocational Psychology

2. **Assessment**
   - PRE 725 Educational Measurement
   - PRE 830 Individual and Group Assessment
   - PRE 951 Psychodiagnostic Assessment

**Human Development (3 hours).** One 3-hour graduate course in life span development psychology is required. See offerings in PRE, Psychology, or Applied Behavioral Science. PRE 705 Human Development Through the Life Span is recommended.

**Research Core**

1. **Required Courses**
   - PRE 710 Introduction to Statistical Analysis
   - PRE 711 Lab for Introduction to Statistical Analysis
   - PRE 715 Understanding Research in Education
   - PRE 811 Analysis of Variance
   - PRE 904 Regression Analysis
   - PRE 902 Research Methodology in Education or PSYC 966 Research Methods in Clinical Psychology or PSYC 815 Design and Analysis for Developmental Research

2. **Research Practicum**
   - PRE 901 Research Practicum in (Counseling Psychology) (3 hours) Must be completed within two years of the first enrollment for students entering with the master’s degree or within three years of the first enrollment for students entering with the bachelor’s degree.
   - PRE 814 Nonparametric Statistics
   - PRE 816 Evaluating School Programs
   - PRE 822 Educational Scales, Questionnaires, and Sampling
   - PRE 903 Computer Applications for Statistical Analyses
   - PRE 905 Multivariate Analysis
   - PRE 906 Confirmatory Factor Analysis and Multivariate Statistical Modeling
   - PRE 921 Theory and Applications of Educational Measurement
   - PSYC 991 Longitudinal Data Analysis
   - ELPS 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)
- **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; the average is 20 to 22 hours).
  - PRE 999 Doctoral Dissertation

**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. Internship placement is not permitted to begin 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**

Program Director: Bruce Frey, bfrey@ku.edu, 738 J.R. Pearson, (785) 864-3931

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.** The admission deadline is January 15 to begin course work in the following summer or fall. To begin course work in the following spring, the admission deadline is November 15.

**Required Admission Materials:**
1. Graduate Application Form, www.grad.ku.edu/GAPC, and application fee. See Admissions in the General Information chapter of this catalog.
3. One copy of official transcripts of all previous college work, sent directly to the Graduate Application Processing Center. The original transcript is forwarded to the School of Education to complete licensing and/or certification paperwork.
4. GRE (general test) scores: Institution code of R6871, Department code of 3403.
5. Letter of intent.
6. Résumé.
7. Three letters of recommendation from people who can assess the applicant’s prospects for completing the program.

**M.S.Ed. in Educational Psychology and Research**

The M.S.Ed. program allows students to explore five core areas: learning and instruction, applied human development, testing and measurement, statistics, and research and evaluation methods. Students develop a concentration in one area.

**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

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**GRADUATE CATALOG**

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**Psychology & Research in Education**
Ph.D. in Educational Psychology and Research

Doctoral study passes through three stages. In the introductory stage, the emphasis is on the general content of educational psychology and research and the fundamental measurement, evaluation, and research skills needed by scholars. In the professional specialization stage, the emphasis is on advanced knowledge and skills in specific areas of study, application of evaluation and research skills, and production and identification of formal, researchable hypotheses. In the doctoral research stage, emphasis turns to the ability to conduct research independently on original problems, to disseminate research findings, and to participate in professional activities.

Course Work Requirements

Educational Psychology and Research Core Areas. 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 completed in addition to that required for the educational psychology and research master’s degree.

1. Learning and Instruction. Typical courses include
   - PRE 807 Theories and Research in Human Learning
   - PRE 907 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

3. Measurement and Assessment. Typical courses include
   - PRE 822 Educational Scales, Questionnaires, and Sampling
   - PRE 921 Theory and Applications of Educational Measurement

4. Statistics. 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 902 Research Methodology in Education

6. Research Practicum
   - PRE 901 Research Practicum in: _____
   - PRE 902 Research Methodology in Education

School of Education Core Requirements in Curriculum and Instruction and Educational History or Philosophy. All students must enroll in one course in curriculum and instruction and one course in educational history or philosophy.

Program Requirement. All students must enroll at least once in PRE 940 Advanced Studies in Educational Psychology and Research.

Supervised College Teaching. All students must enroll in PRE 996 College Teaching Experience in: _____

Research Skills. Doctoral preparation in educational psychology and research implies a strong emphasis on the development of research skills. Every doctoral student must demonstrate these skills by completing three projects. Examples include submission of a scholarly paper to an appropriate professional organization, development of a position paper on an issue related to educational psychology and research, or application of statistical procedures to a dataset.

Comprehensive Examination. Following completion of course work, a student must complete and pass a written comprehensive examination and then a comprehensive oral examination. The program defines the nature of these examinations.

Dissertation. Upon passing the written and oral portions of the comprehensive examination, the candidate, in consultation with the adviser, assembles a dissertation committee. For information on post-comprehensive enrollment and general information about doctoral programs, see the pertinent chapters of this catalog.
The Department of Psychology and Research in Education offers programs in counseling psychology, educational psychology and research, and school psychology.
PRE 598 Special Course: (1-5).
PRE 690 Introduction to School Psychology (3).
PRE 700 Advanced Educational Psychology: Development and Education of the Adolescent (2-3). An introduction, from a psychological perspective, to topics and problems in the development of adolescents and youth, with emphasis on application to educational issues. Note: To be offered annually. LEC.
PRE 702 Advanced Educational Psychology: The Development and Education of the Child (3). Study of children from a cognitive developmental perspective. Changes in children are examined in light of environmental influences including social factors, educational practices, and child-rearing as they interact with conditions internal to children. Key issues include the study of cognition, language, motives, social-emotional issues, the self, and the problem of developmental delays. A major concern is the role of adults in supporting positive development, particularly in educational settings. LEC.
PRE 703 Constructive Classroom Discipline (3). This course will examine concepts and techniques of constructive classroom management. Various theoretical orientations including humanism and behavioralism 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. LEC.
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. LEC.
PRE 705 Human Development Through the Life Span (3). This course will cover the social, emotional, psychological, and cognitive changes that occur from conception through death. Methodological issues will also be addressed. Prerequisite: A graduate or undergraduate course in psychology. LEC.
PRE 710 Introduction to Statistical Analysis (3). Emphasis on the conceptual underpinnings of statistical analysis of educational data. Includes univariate and bivariate descriptive statistics, sampling distributions, statistical estimation, hypothesis testing and procedures in testing statistical hypothesis for one and two sample descriptive statistics, sampling distributions, statistical estimation, hypothesis testing and procedures in testing statistical hypothesis for one and two sample distributions. Prerequisite: Concurrent enrollment in PRE 711 required, or with the permission of the 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 packages, with an emphasis on descriptive statistics, graphical procedures, and univariate parametric methods. Graded on a satisfactory/fail basis. Prerequisite: Concurrent enrollment in PRE 710 or PRE 811 or with the permission of the instructor. LAB.
PRE 712 Beyond Curriculum: Assessment, Classroom Management, Counseling, and Consultation (3). Development of classroom skills that serve to promote healthy student behavior and optimal academic performance. Emphasis on the use of data in instruction, assessment, behavior management, and communication with stakeholders. Serves to promote teacher practice characterized by accuracy of measurement and assessment, a preventative approach to classroom management, and effective communication with students, parents/guardians, and other professionals. Course format involves collaboration of several graduate faculty and an experiential component designed to foster skill acquisition and efficacy. Prerequisite: Successful completion of student teaching. LEC.
PRE 715 Understanding Research in Education (3). This course introduces the 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, student analysis, relating evaluation to instruction, grading, and reporting to students, parents, and the school. Norm referenced and criterion referenced tests are considered. LEC.
PRE 720 Educational Measurement in the Classroom (3). An introduction 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, student analysis, relating evaluation to instruction, grading, and reporting to students, parents, and the school. Norm referenced and criterion referenced tests are considered. LEC.
PRE 725 Educational Measurement (3). The course is an introduction to the application of concepts of reliability, validity, and practicality to the development, selection, use, and interpretation of tests and other measuring instruments in the field of education. The concepts of norm referenced and criterion referenced tests; the interpretation and use of norms; standard scores, percentiles, quotients, and grade equivalents are among the topics covered. An understanding of the role of measurement in evaluation, diagnosis, selection and placement is included. LEC.
PRE 740 Counseling and Interviewing Skills (3). An experiential and performance-based course having three major objectives: 1) the acquisition of basic counseling skills and strategies by means of microcounseling training; 2) learning to use these skills effectively and appropriately 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 examination of several major theories of counseling and therapy including psychodynamic, person-centered, behavioral, and cognitive-behavioral approaches. Attention given to research reviews and factors various theories have in common. Designed for graduate students in counseling psychology or allied fields. Prerequisite: Graduate student status or permission of the instructor. LEC.
PRE 790 Research and Evaluation Proposal Development (3). A course for students designing a research or evaluation proposal leading to data collection. Specific topics covered include formulating a problem and literature review, selecting appropriate research and evaluation designs, instrument development, and data analysis issues. The goal of the course is to aid students in the preparation of research 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 which regularly scheduled courses are not given). Prerequisite: Written consent of laboratory coordinator. LEC.
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 major issues affecting changes after adolescence. Topics include intelligence, identity, intimacy, the role of work, and moral concepts. Theoretical issues, research findings, and educational and social policy implications will be considered. Students will prepare oral reports on key topics 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 ad- ministration, scoring, and interpretation of the major individual intelligence tests for children, adolescents, and adults. Other areas to be covered in this course will include models of intelligence and factors influencing intelligence; measurement characteristics of instruments; methods to assess cognitive abilities; ethical and legal issues in the use of intelligence tests; and the use of cognitive assessments for identification and diagnosis. Prerequisite: Prior completion of course in developmental psychology. 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 current issues of a 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 Human Learning (3). An overview of important models, principles and research findings related to the learning process. Attention is given to theories of learning and information processing which attempt to explain perceptual behavior, verbal learning and memory and social learning processes. Emphasis is placed on student development of research proposals in the area of human learning and achievement. Prerequisite: Permission of instructor. LEC.
PRE 811 Analysis of Variance (3). Analysis of variance techniques including one-way ANOVA, planned and post hoc comparisons, multivariate 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 nominal and ranked data. Prerequisite: PRE 813. LEC

PRE 816 Evaluating School Programs (3). Methods and procedures for evaluating educational programs. Attention is given to the development and evaluation of goals and objectives, creation of designs to monitor processes and outcomes, utilization of test and measurement systems for assessing outcomes, establishing evaluation standards and criteria, and application of statistical analyses. Prerequisite: PRE 710 or equivalent. LEC

PRE 822 Educational Scales, Questionnaires, and Sampling (3). Development, construction, validation and scaling of noncognitive instruments including questionnaires, surveys, checklists, rating scales and unobtrusive measures. The sampling methodology is emphasized. Item construction and analysis and the development of subscales are stressed. Prerequisite: PRE 720 or PRE 725 and PRE 710. LEC

PRE 830 Individual and Group Assessment (3). A consideration of basic concepts pertaining to selection and interpretation of both standardized and nonstandardized assessment procedures and devices with attention given to communicating assessment information within 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 Intervention (3). Students will learn techniques of formal and informal assessment of academic skills in school-aged students. In addition, students will learn consultation and intervention approaches and strategies for use with students who have academic delays. This course will have field-based components that will include supervised counseling sessions. Students enroll in practicum for the level most closely related to their professional goals, i.e., elementary, secondary, counseling psychology. Graded on a satisfactory/fail basis. Prerequisite: PRE 740, PRE 742, and PRE 880, and prior or concurrent enrollment in PRE 830, 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 life planning. Course includes topics such as career development, decision-making, goals for counseling, and career counseling activities. Students enroll in practicum for the level most closely related to their professional goals, i.e., elementary, secondary, counseling psychology. Graded on a satisfactory/fail basis. Prerequisite: PRE 740, PRE 742, and PRE 880, and prior or concurrent enrollment in PRE 830, PRE 840, PRE 844, and PRE 846. Pre-enrollment with practicum coordinator. Students currently on academic probation will not be allowed to enroll in practicum. LEC

PRE 850 Human Relationship Skills in the Classroom (3). The purpose of this course is to provide educators with 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 Psychoeducational Clinic I: Assessment, Consultation, and Intervention (3). This is a practical course where students apply previous learning and gain experience with assessment, consultation, and intervention. 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. Topical seminars also are included throughout the semester. Prerequisite: Graduate 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. Interventions, 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 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 Psychoeducational Clinic II: Assessment, Consultation, and Intervention (3). A continuation of School Psychology Clinic I where students will be performing the same activities at a higher level of autonomy and independence. Prerequisite: Students must be standing in the School Psychology program, PRE 855, and permission 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 stresses cul- tural differences of racial minorities and various socioeconomic subgroups and will provide opportunities for self-examination of cultural assumptions/values and effects within counseling. Prerequisite: PRE 742 or equivalent. LEC

PRE 890 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 counseling, ethical standards of the counseling profession, legal issues relating to school counselors' professional practice, and issues of practice liability and risk management. LEC

PRE 891 Diagnosis and Psychopathology (3). An examination of psychological disorders from a counseling psychology perspective that emphasizes strengths. The course will cover the current versions of the Diagnostic and Statistical Manual (DSM), as well as alternative taxonomies, exploring personality as it ranges from normal personality styles to personality disorders, as well as Axis I disorders. The emphasis is on diagnosing and assessing these phenomena and understanding possible behavioral and treatment implications. Prerequisite: Degree seeking status in Counseling Psychology or consent of instructor. LEC

PRE 893 Internship in School Counseling (2). Two consecutive enrollments covering a period of one academic year. During this time the student prepares a portfolio and provides field experience in public schools. Non-majors with a major in Psychology may seek permission to participate in this experience. Prerequisite: Students must have school counseling position and a completed Masters degree from K.U. in School Counseling. LEC

PRE 896 Seminar in: (1-3). Prerequisite: Permission of instructor. LEC

PRE 897 Independent Study (1-4). Graded on a satisfactory/satisfactory basis. Prerequisite: Consent of adviser and instructor. RSH

PRE 898 Master's Project (1-4). Prerequisite: Must have school counseling position and a completed Masters degree from K.U. in School Counseling. LEC

PRE 899 Master's Thesis (1-6). Prerequisite: Must have concurrence and PRE 897. LEC

PRE 900 Legal, Ethical, and Professional Issues in Professional Psychology (3). This course is designed to examine major legal and ethical principles and issues that pertain to the practice of professional psychology. Emphasis is placed on legal, ethical, and professional standards and issues affecting the practice of professional psychology and current issues that affect the future direction of research and practice. Prerequisite: Doctoral status in counseling, clinical, clinical child, or school psychology, or consent of the instructor. LEC

PRE 901 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 of the School of Education for two semester research practicum course.) Prerequi- site: Doctoral student status in a program in the Department of Psychology and Research in Education. RSH

PRE 902 Research Methodology in Education (3). The examination and study of research methods and procedures related to the validation 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 822. 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 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 experiences. Prerequisite: Graduate standing in the School Psychology program and permission of instructor. LEC

PRE 910 Practicum in School Psychology (3). Supervised practice in the application of psychological theory of educational principles to school personnel. Includes work with exceptional children as well as experience in the application of such areas as men- tal hygiene and learning theory to problems involving the total school population. Prerequisite: PRE 807 and PRE 715 or permission of instructor. LEC

PRE 911 Practicum in School Psychology (3). Supervised practice in the application of psychological theory of educational principles to school personnel. Includes work with exceptional children as well as experience in the application of such areas as men- tal hygiene and learning theory to problems involving the total school population. Prerequisite: PRE 807 and PRE 715 or permission of instructor. LEC

PRE 912 Practicum in School Psychology (3). Supervised practice in the application of psychological theory of educational principles to school personnel. Includes work with exceptional children as well as experience in the application of such areas as men- tal hygiene and learning theory to problems involving the total school population. Prerequisite: PRE 807 and PRE 715 or permission of instructor. LEC
PRE 916 Educational Evaluation: Theory and Practice (3). The course will treat an intensive critical study of a series of evaluation as it exists opposite the experimental research process, emphasizing the operational definitions of objectives, existing models, taxonomies, and structure, and goals and methods of obtaining and summarizing evaluation data. Prerequisite: PRE 710 and PRE 816 or equivalent. LEC

PRE 918 Seminar in Current Issues and Trends in Psychology (1-3). An examination of selected current issues and trends. (This course fulfills the requirement by the School of Education for a course in current issues and trends.) Prerequisite: Doctoral status or consent of instructor. LEC

PRE 921 Theory and Applications of Educational Measurement (3). Application of theory including classical theories of reliability and validity, latent-trait theories, item sampling, and factor analysis to problems in educational test development and use in areas such as evaluation, research, placement, and selection. Prerequisite: PRE 725 and PRE 811. LEC

PRE 922 Item Response Theory (3). Theoretical foundations and practical applications of item response theory in educational measurement. Prerequisite: PRE 921. LEC

PRE 930 Ethics and Current Issues in School Psychology (3). This course is intended to introduce the student to a) ethical principles, standards, and issues in the profession of psychology; b) legal issues involved in the practice of school psychology; c) professional and ethical standards to solve ethical dilemmas; and d) the role of the school psychologist in the field of school psychology. Prerequisite: Permission of the instructor. 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. Emphasis is on a survey course of research in the area of educational psychology with a focus on various 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 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. Graded on a satisfactory/fail basis. Prerequisite: PRE 842 or equivalent. LEC

PRE 949 Advanced Practicum II (6). Intensive counseling practice, including group and individual supervision, 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. Graded on a satisfactory/fail basis. Prerequisite: Satisfactory completion of PRE 948 and prior or concurrent enrollment in PRE 951. LEC

PRE 950 Cognitive Theory and Strategies in Counseling Psychology (3). An examination of contemporary cognitive theories and strategies used in the practice of counseling psychology. Consideration of theoretical positions and issues, research functions, assessment strategies, and application of techniques. Prerequisite: Completion of psychology 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: Completion of PRE 830 and degree-seeking status in Counseling Psychology or consent of instructor. LEC

PRE 952 Advanced Counseling Theory and Research (3). An advanced treatment of 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 systems, interactional, and communications perspectives, with implications for research and assessment in counseling. Designed for graduate students at the specialist and doctoral levels. Prerequisite: Counseling Psychology doctoral student status or consent of instructor. LEC

PRE 954 Vocational Psychology (3). A survey of the major career development theories in counseling psychology. Models and methods of career counseling will be reviewed and integrated from the different theoretical perspectives. The empirical support for each approach will be evaluated. 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 diverse, and the developmentally disabled) will be studied as an alternative to delivery in career development and counseling. Prerequisite: Completion of PRE 846 or equivalent, and Ph.D. degree-seeking status in Counseling Psychology or consent of instructor. LEC

PRE 956 Theory of Marriage and Family Counseling (3). A survey of contemporary theories and research on marital and family function/dysfunction, theoretical models of family interaction, models of counseling practice and methods, and research on marital and family counseling. Prerequisite: Degree-seeking status in Counseling Psychology or consent of instructor. LEC

PRE 960 Assessment of 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. In-student appropriate planning and 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 to also give the students practical experience in administering representative instruments from the various domains. Prerequisite: PRE 702, PRE 725, and 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 consultative 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 development concerns of adult men and female clientele. Additional emphasis is given to encouraging research projects related to the adult life span and effective counseling practices. Prerequisite: Graduate student status as an advanced master’s level or doctoral student. Consent of Program in Counseling Psychology or written permission of instructor. LEC

PRE 975 Therapeutic Intervention: Home and School (3). This course includes a review of literature and theory as well as supervised practice. Therapeutic intervention is broadly conceived, including individual and group counseling, and parent and teacher consultation. The importance of the family-school relationship is stressed. Prerequisite: Permission of instructor and completion of course on counseling. LEC

PRE 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 advisor, the program training director, and internship setting supervisors. Required of all 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 992 U.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 (5). 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 Psychology committee. FLD

PRE 995 Field Experience in: _____ (1-5). Supervised and directed experiences in selected educational settings. The adviser will schedule regular observations of the field experience and conferences with the student. Written summaries and evaluations of the field experiences will be prepared independently by the student, a representative of the cooperating agency, and the adviser. Open 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 and implementation of the experience are the responsibility of the student and the advisor. Prerequisite: Approval of the student’s department. FLD

PRE 997 Individual Study (1-3). A course of independent study designed to meet individual student needs and to provide an opportunity for the student to prepare independently by the student or individuals designated by the candidate’s committee. LEC

PRE 998 Seminar in: ____ (1-4). Course is graded on a satisfactory/fail basis. RSH

PRE 999 Doctoral Dissertation (1-15). THE
Special Education
Chair: Chriss Walther-Thomas, chrisswt@ku.edu
Joseph R. Pearson Hall, 1122 West Campus Rd., Room 530
Lawrence, KS 66045-3101
http://specialeducation.soe.ku.edu, (785) 864-4954
Admissions Officer: Sherrie Saathoff, specialeduadm@ku.edu,
532 Joseph R. Pearson Hall, (785) 864-0556
Professors: Carta, Chaffin, Clark, Deshler, Greenwood, Horn, Meyen, Peterson, Sailor, Simpson, Skrtic, A.Turnbull,
H.R. Turnbull, Walther-Thomas, Wehmeyer
Professors Emeriti: Gallagher, Guess, Moran, Whelan
Associate Professors: Gautt, Knowlton, Lenz, Morningstar,
Myles, Robinson, Smith, Thompson

The Department of Special Education offers graduate education for students interested in teaching, research, and professional service related to children, adolescents, and adults with disabilities and their families. Since the 1970s, the department’s master’s and doctoral programs have received national and international recognition. The faculty is known for its field leadership and commitment to high-quality education for children and youth with disabilities, innovative field-based research, and preparation of highly effective program graduates. The annual U.S. News and World Report graduate program survey consistently ranks KU at the top when compared to more than 200 graduate programs in this field. As one of the most comprehensive special education preparation programs in the country, the department attracts students from many states and countries.

Graduate degrees associated with the department’s programs include the Master of Science in Education (M.S.Ed.), Doctor of Education (Ed.D.), and Doctor of Philosophy (Ph.D.). The master’s program allows students to pursue preparation for teaching in one of six areas: Adaptive (i.e., high-incidence disabilities), Autism Spectrum Disorders, Deaf Education, Early Childhood Unified (birth through 5), Functional (i.e., low-incidence disabilities), and Transition Services. Students seeking Kansas State Department of Education teaching licensure or endorsement requirements may choose not to complete endorsement requirements. The doctoral programs prepare experienced professionals for leadership roles as university faculty, public services administrators, consultants, researchers, clinicians, family and community services directors, and policymakers. Course work and field experience facilitate the development of advanced knowledge and skills in leadership, teaching, research, writing, and disability advocacy (e.g., early childhood education, policy development and program administration, assistive and instructional technology, specific disabilities, law and public policy, teacher preparation, families and disability, and transition services).

Admission procedures, program descriptions, and degree requirements are available online at http://specialeducation.soe.ku.edu or may be obtained from the Department of Special Education admissions officer, Sherrie Saathoff, specialeduadm@ku.edu.

Submit your application online at www.graduate.ku.edu/GAPC. Send original transcripts of all completed college and university course work to

The University of Kansas
Graduate Application Processing Center
Strong Hall, 1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

Send all other required admission materials to

The University of Kansas
Sherrie Saathoff, Admissions Officer
Department of Special Education
Joseph R. Pearson Hall, 1122 West Campus Rd., Room 521
Lawrence, KS 66045-3101

Graduate classes are taught on the main campus in Lawrence and on the KU Edwards Campus in Overland Park in suburban Kansas City about 40 miles from Lawrence. Master’s and doctoral students can expect to complete some graduate work on each campus.

M.S. in Education Degree Program
Graduates are employed as general educators, special educators, or consultants. Some hold teaching positions in clinics, hospitals, residential treatment centers, community-based centers, and early childhood programs. Many complete course work required for Kansas special education teaching endorsement. Some students work in related fields (e.g., general educators, speech therapists, social workers) and pursue this degree to expand their professional knowledge and skills by adding competence teaching children and youth with disabilities. These students may choose not to complete endorsement requirements. The M.S.Ed. program (including endorsement course work) ranges from 35 to 42 credit hours depending on the emphasis. In Kansas, students pursuing special education licensure can be recommended for provisional teaching endorsement after completing 9 credit hours (i.e., disability characteristics, methods and assessment, and fieldwork practicum). The degree involves 7 to 10 additional hours including content elective(s), research, and completion of a project, thesis, or written examination.

Doctoral Degree Programs
The Ph.D. and Ed.D. programs are similar, but serve different needs for special educators seeking advanced knowledge and leadership skills. Both degrees require intensive and rigorous study in special education foundations, disability issues, curriculum, teaching, program development, and research. The Graduate Record Examination is required for admission.

Doctor of Education. This degree is designed for master special educators who seek leadership positions in public school and other agencies related to program leadership, administration, development, and evaluation. Students complete a sequence of courses emphasizing applied research knowledge and skills. Specific core and research skills for the Ed.D. are described in the department’s Guide to the Doctoral Program, online at http://specialeducation.soe.ku.edu. The research skills requirement may be satisfied by completing a minimum of 12 hours that develop skills related to understanding, promoting, and evaluating spe-
Special Education courses (e.g., statistics, assessment and evaluation, research methods, and evaluation). In addition to a research skills core, students complete a structured, supervised field internship.

**Doctor of Philosophy.** This degree emphasizes research skills development. Graduates are prepared for roles as university faculty, researchers, program managers, policy makers, or clinicians. Specific core and research skills for the Ph.D. are described in the department’s *Guide to the Doctoral Program*, online at [http://specialeducation.soc.ku.edu](http://specialeducation.soc.ku.edu). Research skills requirements are satisfied by a minimum of 6 hours of statistics and a minimum of 9 hours in one or more of the following areas: quantitative methods, qualitative methods, measurement and assessment, and historical and philosophical methods.

### Special Education Courses

**SPED 500** Introduction to Sign Language (3).

**SPED 501** American Sign Language I (ASL I) (3).

**SPED 502** American Sign Language II (ASL II) (3).

**SPED 503** American Sign Language III (ASL III) (3).

**SPED 504** American Sign Language IV (ASL IV) (3).

**SPED 598** Special Course: ______ (1-5).

**SPED 631** Characteristics of Students Needing an Adaptive Curriculum (3).

**SPED 632** Characteristics of Students Needing a Functional Curriculum (3).

**SPED 633** Characteristics of Learners with Hearing Loss—Deaf Studies (3).

**SPED 635** Characteristics of Children and Youth with Disabilities: ______ (3).

**SPED 641** Methods: Academic Instruction for Children and Youth with Disabilities In General Education and Learning Center Settings (3).

**SPED 644** Assessment and Instructional Methods I: Learners with Hearing Loss (3).

**SPED 650** Curriculum and Methods of Instruction in Early Education (3).

**SPED 660** Education of Children and Youth with Disabilities I: ______ (3).

**SPED 661** Supporting Children with Significant Learning and Behavioral Challenges (3).

**SPED 663** Assessment Strategies in Early Education (3).

**SPED 664** Inclusive Strategies and Intervention for Infants and Toddlers (3).

**SPED 665** Inclusive Strategies and Intervention for Preschoolers (3).

**SPED 667** Field Experience in Preschool (1).

**SPED 668** Field Experience Infant/Toddler (1).

**SPED 672** Field Experiences with Exceptional Children and Youth: ______ (3).

**SPED 700** Introduction to Sign Language (3). This is an introductory course in Sign Language and includes ASL and English sign vocabulary, a description of all manual sign systems, medical aspects of hearing loss, communication and language, and Deaf culture and community. LEC

**SPED 701** American Sign Language I (ASL I) (3). This course will cover the development of American Sign Language and its application within the Deaf Community. It is based on the functional-notational approach to learning sign language. This approach organizes language around communicative purposes of everyday interaction. LEC

**SPED 702** American Sign Language II (ASL II) (3). This is the second level course in American Sign Language and its application within the Deaf Community. It is based on the functional-notational approach to learning sign language. This approach organizes language around communicative purposes of everyday interaction. Prerequisite: SPED 701. LEC

**SPED 703** American Sign Language III (ASL III) (3). This is the third level course in American Sign Language. The primary objective of the American Sign Language III “Signing Naturally” Level 2 curriculum is for students to continue using the two basic language skills: visual listening and signing. Prerequisite: SPED 702. LEC

**SPED 704** American Sign Language IV (ASL IV) (3). This is the fourth level course in American Sign Language. The primary objective of the American Sign Language IV “Signing Naturally” Level 3 curriculum is for students to continue using the two basic language skills — visual listening and signing. Prerequisite: SPED 703. LEC

**SPED 706** Advanced Practices for Children with Disabilities in the Elementary General Education Classroom (3). This course is designed to enable novice teachers to master and apply the instructional and communicative skills that facilitate appropriate and productive inclusion of young age students with disabilities within general education classrooms and other school settings. Specific research-based strategies in curriculum content acquisition (content enhancements, learning strategies, class-wide-peer tutoring), and specific research-based strategies in behavior management will be applied and real teaching experiences. Prerequisite: Admission to the Teacher Education Program. LEC

**SPED 707** Advanced Practices for Adolescents with Disabilities in the Middle/Secondary General Classroom (3). This course is designed to enable novice teachers to master and apply the instructional and communicative skills that facilitate appropriate and productive inclusion of secondary age students with disabilities within general education classrooms and other school settings. Specific research-based strategies in curriculum content acquisition (content enhancements, learning strategies, class-wide-peer tutoring), and specific research-based strategies in behavior management will be learned and applied to real teaching experiences. Novice teachers will learn about collaborative structures found in schools to support student learning in general education settings (co-teaching, collaborative consultation, teacher/student support teams) and roles and responsibilities of teachers within these structures. Prerequisite: Admission to the Teacher Education Program. LEC

**SPED 708** Introduction to Hearing Impaired (2). A study of hearing defects and methods of diagnosis. The course also covers remedial work which teachers can use in treating such defects and meeting problems of hearing defective children. Prerequisite: Nine hours of education including educational psychology. LEC

**SPED 710** Methods of Teaching Language to the Deaf I (3). The effects of hearing loss on language acquisition and development for deaf and hearing impaired individuals with hearing loss are introduced. Prerequisite: Course in normal language development and nine hours of education including educational psychology. LEC

**SPED 715** Understanding Research in Education (3). This course introduces concepts and skills involved in understanding and analyzing research in special education. The course provides an overview of basic, general knowledge of various research methodologies. In addition, this course will teach students to locate, read, comprehend, and critically analyze research articles and reports. Students will become familiar with the principles of educational research to become good “consumers” of this research. LEC

**SPED 717** Exceptional Children in Regular Classrooms (3). This course is designed to enable novice teachers to provide instructional services to exceptional children assigned to regular classrooms. Prerequisite: SPED 701. A study of hearing defects and methods of diagnosis. The course also covers remedial work which teachers can use in treating such defects and meeting problems of hearing defective children. Prerequisite: Nine hours of education including educational psychology. LEC

**SPED 718** Instructional Planning for Children with Disabilities (1-3). This course provides knowledge and skills to select, adapt, and sequence instructional methods and materials to facilitate general education curriculum mastery. LEC

**SPED 719** Learning and Technology (1). The central framework of “human learning” provides a context for understanding technology-based educational innovations. The lessons in this course explore how various “features of learning” and “features of technology” intersect. They discuss realistic options for improving the learning of students, and the learning of teachers, as they use technology in education. (Life span range of levels.) LEC

**SPED 724** Data-driven Instructional Decision Making (1). The lessons in this course present research-based methods for monitoring student behavior and academic progress. They explain how teachers may use this information to evaluate current and plan future instructional and behavioral interventions following a decision making model. It is also explored how computer and information management technology tools support and facilitate the collection, storage, and analysis of observational data. LEC

**SPED 725** Introduction to the Psychology and Education of Children and Youth with Disabilities (3). This course provides an overview of current practices in the identification, placement, and diagnosis of exceptional children. This course focuses on understanding the needs and characteristics of learners with special needs. Topics include an overview of learning disabilities and behavior disorders and specific research in these areas. Prerequisite: One course in Child Development. LEC

**SPED 726** Exceptionality and Technology (1). Technology has the potential to dramatically improve the education and quality of life for people with disabilities. This course presents you with a basic foundation for understanding technology in special education, a functional model for selecting the best technology applications for students with special needs, and strategies for applying your knowledge to practical situations. LEC

**SPED 729** Introduction to Computing in Special Education (3). This course is designed to provide an introduction to basic concepts of computer literacy, with particular emphasis on the uses of microcomputers in educational settings for individuals with special needs. Topics include an overview of computing specific to the needs of individuals with special needs including: a) applications and the impact on personal and professional aspects of life; b) computer hardware and software; c) instructional and interactive software; d) instructional technology. LEC

**SPED 730** Characteristics of Students in the Adaptive and Functional Curriculum (3). This course is designed as an introduction to the definition, characteristics, functional/performance, and specific educational needs of students with specific disabilities. The emphasis is on the adaptive and functional curriculum. The needs for specialized services to meet specific learning and/or behavioral needs will be presented. Students will learn about the history of serving children and youth with disabilities. 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 ad-
dress specific needs, will also be addressed. Characteristics will be addressed in relation to (a) how specialized instruction can meet the learning and developmental needs of these individuals, specifically in areas of instructional and assistive learning. LEC

SPED 733 Characteristics of Learners with Hearing Loss—Deaf Studies (3). Deaf Studies is the basic characteristics course for both the Master’s degree in Deaf Education and for Kansas and Missouri endorsement in Deaf/HOH. The course includes medical aspects/etiology of hearing loss, history, pertinent laws, Deaf culture and community, issues in assessment and psychology, language and sign systems, multicultural education, multiple disabilities and hearing loss, and specific issues in the field. LEC

SPED 735 Characteristics of Children and Youth with Disabilities: _____ (3). Social, cognitive, emotional, and other developmental aspects associated with children and youth identified 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 740 Managing Classroom Behavior of Exceptional Children and Youth (3). Designed to acquaint regular and special education teachers, principals, school psychologists, counselors, and speech pathologists with principles and application of classroom management techniques applicable to exceptional children and youth. Methodology for providing intervention of adaptive behaviors through positive management procedures will be stressed. Includes an introduction to behavior analysis. Prerequisite: SPED 425 or SPED 725. LEC

SPED 741 Methods and Assessment: Academic Instruction for Students with Disabilities in General Education and Learning Center Settings (3). This course is an initial assessment and methods course for individuals seeking Kansas licensure in Adapted or Functional Special Education. The course addresses how to assess student academic skills and to develop Individualized Educational Plans. Students will learn about academic assessment and instructional planning to differentiate various learner needs, universal design principles, and developing appropriate accommodations and modifications to facilitate student learning. Particular attention is given to assessment and instructional strategies for supporting literacy development in reading and math. Prerequisite: SPED 631 or SPED 731, and SPED 632 or SPED 732. LEC

SPED 742 Methods and Assessment: 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 conduct ecological inventories and other student-referenced planning, design community-based instructional programs, ecologically valid and age-appropriate to facilitate mastery of skills essential for community and social inclusions, explore best practices in community based instructional programs, including family and student involvement, transportation, and administrative and policy support. Prerequisite: SPED 632 or SPED 732. LEC

SPED 743 Methods: Functional Behavioral Assessment, Positive Behavior Support, and Classroom Management (3). This course provides a problem-solving approach and the framework for teaching and assessment strategies to develop pro-social behavior in students with disabilities and their typical peers in classrooms and whole school contexts. Students assess problem behavior, discover the functions of problem behavior, and learn pro-social alternatives in home, school, and community settings. Prerequisite: SPED 425 or SPED 725. LEC

SPED 744 Assessment and Instructional Methods I: Learners with Hearing Loss (3). This course will provide an introduction to appropriate instructional methodology for teaching students who are deaf or hard of hearing at the early childhood, elementary, and secondary levels. Upon completion students will be familiar with legal issues, teaming, assessment, IEP development, curriculum planning, instructional methods, and transition. LEC

SPED 745 Audiology and Aural Rehabilitation (3). This course will provide a broad overview of the components of an aural rehabilitation service delivery model including audiological diagnoses and assessment, selection and fitting of a variety of listening devices, and intervention strategies for auditory training and speech perception training. The emphasis of this course will be on the aural habilitation of children; therefore, each of the components of an aural (re)habilitation process will be considered in relation to the needs of individual children and their families. LEC

SPED 751 Application of Assessment Information in Planning Instruction for Students with High-incidence Disabilities (Adaptive) (3). This course is designed for teachers seeking the Adaptive certification to teach students with High-incidence Disabilities (Adaptive). Students will learn how to select, administer, score, and interpret formal and informal assessments; make data-based instructional decisions for students with specific learning disabilities, with social and emotional needs and disorders in behavior, mild mental retardation, and/or who experience other chronic health impairments. Individually chosen and administered tests, as well as high-stakes assessments, and will be discussed. Prerequisite: SPED 631 or SPED 731. LEC

SPED 760 Education of Children and Youth with Disabilities I: _____ (3). This is a methods course that covers instructional approaches and procedures that offer developmentally appropriate, effective and inclusive early intervention for pre-school and kindergarten age children who experience developmental delays, disabling conditions or who are at-risk for developmental problems and disabilities. It is directed toward: (a) how to teach, or the technical components of developing and delivering effective instruction that provide access to the general early childhood curriculum within recognized approaches to early childhood education for young children, and (b) the what to teach, or the selection of developmentally and individually appropriate instructional objectives as well as specific materials and specialized instructional approaches. The relationship of instructional planning to state and federal mandates will also be considered. The course is primarily intended for persons who are currently working toward certification in the ECSE program area. Prerequisite: SPED 425 or SPED 725, and SPED 735, which can be taken concurrently. LEC

SPED 761 Foundations of Positive Behavioral Support (PBS) (1). The purpose of this course is to provide an introduction to positive Behavioral Support (PBS). The lessons contained within this course include an overview of positive behavioral support, the basics of behavior, an introduction to specific positive behavioral support strategies, and a lesson on preventing problem behavior. LEC

SPED 762 Functional Assessment Methods for Positive Behavioral Support (PBS) (3). This course introduces current functional assessment methods that are used to build effective behavioral support plans. A strong functional assessment is at the heart of Positive Behavioral Support. After completing this course, you will have a better understanding of how to implement functional assessment methods in the classroom. LEC

SPED 763 Development and Implementation of PBS Plans (1). A positive behavioral support plan (PBS) describes how features of the environment associated with problem behavior will be modified, what and how skills and strategies will be taught, and how individuals supporting a student will respond to both positive and problematic behavior. This course contains lessons on designing PBS plans, implementing PBS plans, and modifying and assessing PBS plans. LEC

SPED 764 Intervention Strategies for PBS I (1). The purpose of this course is to introduce interventions that can be used as part of a comprehensive positive behavioral support plan. An effective positive behavioral support plan contains multiple intervention strategies that address the function maintaining a student’s problem behavior. This course contains lessons addressing setting events, antecedent interventions, replacing problem behavior, and consequence interventions. LEC

SPED 765 Intervention Strategies for PBS II (1). The purpose of this course is to introduce three types of interventions that can be used in positive behavioral support. An effective positive behavioral support plan contains multiple intervention strategies that address the function maintaining a student’s problem behavior. This course contains a lesson on social skills education, crisis prevention, and interventions addressing physiological factors that influence a student’s problem behavior. LEC

SPED 766 Redesigning Environmental Systems (1). The purpose of this course is to describe how positive behavioral support can be used to redesign the environment at a systems level. Considering the larger issues within a system including the environment, environmental values and beliefs held by staff, policies and procedures that promote ongoing learning, and collaborative problem solving within a school will improve implementation of long-term positive behavioral support efforts. This course contains lessons on classroom management, staff development, and discipline. LEC

SPED 767 Creating Positive Lifestyles Through PBS (1). One of the most important outcomes of a positive behavioral support plan is an increase in the quality of life for both the student and everyone within the student’s social network. The purpose of this course is to introduce topics related to creating positive lifestyles including person-centered planning, self-determination, and quality of life. LEC

SPED 772 Participation with Children and Youth with Disabilities: _____ (3). A course designed to provide field experiences with children and youth with disabilities in settings where educational services are provided. Students work directly with professionals such as special education teachers, general education teachers, therapists and other support personnel. Students participate as aides, tutors, and instructors with individual and small groups of children and youth. On-going meetings with supervisors are designed to facilitate both reflection and strategic learning. FLD

SPED 774 Education of Secondary and Post-secondary Level Exceptional Students: _____ (1-3). A course based on the problems and needs of secondary and post-secondary level handicapped students with a focus on curriculum alternatives (academic and vocational), Instructional planning options, instructional...
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methods and materials and educational and community resources. The focus is on both multiple and moderately handicapped students. Prerequisite: Appropriate section of SPED 735 which may be taken concurrently. LEC

SPED 775 Practicum with Children and Youth with Disabilities (1-10). Intensive direct teaching experiences with children and youth with disabilities in educational settings.

SPED 785 Application of Assessment Information for Exceptional Children and Youth (3). An analysis of information derived from assessment instruments and procedures appropriate to measuring the social and cognitive development of exceptional children and youth. Provides an overview of the data required in the development of individualized educational programs (IEP). Attention is also given to the design of informal assessment procedures, specific to the needs of exceptional children and youth. Experience is provided in the preparation and presentation of assessment data for use in instructional planning conferences. Prerequisite: An undergraduate or graduate course in educational measurement, and SPED 425 or SPED 725. LEC

SPED 793 Psychology of Deafness (2). Reviews of the literature pertaining to psychopathology and learning theory to problems involving the total school population. A continuation of SPED 802 Advanced Practicum in School Psychology (3). Emphasis is given to milestones in normal language acquisition and variations from norms demonstrated by handicapped learners. Attention is also given to theoretical approaches to language training, formal and informal language assessment techniques, and instructional methods. Students design individualized plans for incorporating language into the daily curriculum for handicapped learners. Prerequisite: SPED 425 or SPED 725. LEC

SPED 801 Practicum in School Psychology (4). Supervised practice in the application of psychological theory to educational problems. Includes work useful with exceptional children as well as experiences in the application of such areas as mental hygiene and learning theory to problems involving the total school population. (Same as PRE 910.) Prerequisite: Permission of adviser and instructor. FLD

SPED 802 Advanced Practicum in School Psychology (4). A continuation of SPED 801 with special emphasis on remedial techniques associated with learning difficulties. (Same as PRE 911.) Prerequisite: SPED 801 and permission of adviser and instructor. FLD

SPED 804 Designing Online Instruction for E-learning Environments (3). This advanced course examines the process of designing content for e-learning applications. Attention will be given to design features, content structuring, instructional management, evaluation, and collaboration in the process of working with technicians in the process of developing online curriculum and instruction. Prerequisite: None. A background in education is preferred. LEC

SPED 805 Practicum in Individual Intelligence Testing (4). Practicum training, by arrangement, in administration and interpretation of test results for school situations with particular emphasis on the Stanford-Binet. Prerequisite: Permission of instructor. FLD

SPED 809 Language Assessment and Instruction II: Learners with Hearing Loss (3-6). This course covers assessment and instruction of speech skills for students who are deaf or hard of hearing. A historical review of strategies for teaching speech development in deaf students will be provided. Students will learn formal and informal methods of assessment, developmental order and classification systems for English language sounds, and visual, auditory, and tactile facilitation techniques. Laboratory training programs for use in instruction will be emphasized. LEC

SPED 810 Speech Assessment and Instruction III: Learners with Hearing Loss (3-6). The purpose of this course is to prepare students to provide effective language assessment and instruction to students who are deaf or hard of hearing. This course focuses on the effect of hearing loss on assessment, language and reading, communication options, and instructional strategies. LEC

SPED 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. Emphasis is placed on problems, trends and procedures used in career education specifically for the hearing impaired. Prerequisite: SPED 711. LEC

SPED 812 Instructional Approaches in Inclusive Elementary Settings (2). This advanced method course provides curriculum design and instructional procedures appropriate for students at the elementary and middle school levels, including functional academic, social, and home and community life skills. NOTE: This is a 2 credit course to be offered during the first 8 weeks of a semester. It will precede SPED 814 in the same semester. Prerequisite: SPED 614 or SPED 714: Learning Styles and Instructional Accommodations. LEC

The special education doctoral program prepares experienced professionals for leadership roles as university faculty, public services administrators, consultants, researchers, clinicians, family and community services directors, and policymakers.

Prospective students should consult faculty advisers in their areas of interest about changes in special education licensing programs.
SPED 851 Law and Special Education (3). This course focuses on laws that apply to special education. Individualized alternative strategies for individuals with disabilities are emphasized. Prerequisite: SPED 856. LEC

SPED 852 Citizens with Disabilities, Public Policy, and Policy Analysis (3). Students will read and analyze several laws that affect individuals with disabilities, and the various methods of analysis are brought to bear on federal policy (e.g., education, transportation, housing, institutionalization, protection and advocacy, medical assistance, employment, vocational rehabilitation, and others). This course is not valid for core requirement in history and/or philosophy of education. (Same as ELPS 856.) Prerequisite: SPED 851 or permission of instructor. LEC

SPED 853 Professional Ethics, Public Values, and Citizens with Disabilities (3). This course addresses the issues that professionals (e.g., educators, physicians, allied health practitioners, lawyers, and others) and families of persons with disabilities face in the context of public values, attitudes, and rules of law. The issues include education, treatment and nontreatment. This course is not valid for core requirement in history and/or philosophy of education. (Same as ELPS 858.) Prerequisite: SPED 850, SPED 852, or permission of instructor. LEC

SPED 854 Family and Interprofessional Collaboration in Special Education (3). This course is designed to provide knowledge and skills to implement federal and state mandates for special education and related services programs as they relate to families. The course will examine interpersonal relationships with disabilities, and developing effective school programs. It covers procedures for developing, implementing, and evaluating (a) instructional accountability for special education students; (b) participation in district assessment; (c) processes and procedures for managing classroom staff and service resources, coordinating overall treatment/educational programs, planning or selecting curricula, and personnel recruitment, selection, and evaluation; program management; and program evaluation. Students will relate the topical course content to their specific area of special education, SPED 425 or SPED 725 and six additional semester hours in special education. LEC

SPED 855 Transition Education and Services from Childhood Through Adulthood (3). The purpose of this course is to provide a background in career development and transition for students. This course will be given to students with disabilities that affords pre-service general education students training in instructional resource centers and educational programs serving exceptional children and youth. Emphasis will be placed on IDEA requirements for transition services, transition service assessment, secondary special education curriculum implications, career development and transition service needs, collaborative services in schools and communities to promote quality transition services, and issues and trends in transition education and services. LEC

SPED 857 Vocational Training and Employment (3). This course is designed to provide graduate students in special education and related areas with an overview of employment and vocational models for adolescents and young adults with disabilities. Emphasis is placed upon theory and practice related to career development and transition processes, transition services assessment, secondary special education curriculum implications, career development and transition service needs, collaborative services in schools and communities to promote quality transition services, and issues and trends in transition education and services. 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 transition planning. Attention will be given to issues related to observation, measurement, recording, and visual display techniques. Other topics include maintenance and generalization of behavior change. Students will be provided experience in the design and carrying out of research methods and principles related to research methods and principles of behavioral analysis. Prerequisite: SPED 425 or SPED 725 and SPED 839. LEC

SPED 859 Intergeneracy Services for Transition to Adulthood (3). The purpose of this course is to provide an overview of intergeneracy 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-art practices regarding supporting individuals with disabilities in community employment, living, socialization, community participation, and other areas of adult life. Prerequisite: SPED 856. LEC

SPED 860 Education of Children and Youth with Disabilities It: (1-3). This course is designed to prepare students to implement specialized alternative strategies for individualized group instruction. Methods for developing and implementing overall treatment/educational programs, planning or selecting curricula/service models for programs, and developing instructional materials are emphasized. Procedures for managing classroom staff and service resources, coordinating educational programs with families, other service personnel and program support staff, and monitoring overall program effectiveness are addressed. Prerequisite: SPED 760. LEC

SPED 874 Planning for Adult Outcomes: (1-3). The problems, trends, issues, and procedures used in planning life skills, occupational and vocational skills, and transition services for adult living for persons with disabilities. Separate sections will be organized by topics pertaining to career/vocational development, assessment, and transition programs and services. These will include: (a) transition from early childhood to adulthood, (b) Application of assessment information, and (c) vocational preparation and employment. Prerequisite: SPED 725 (may be taken concurrently). LEC

SPED 875 Practicum with Children and Youth with Disabilities: (1-10). This course is designed to provide field work and direct teaching experiences with children and youth with disabilities in educational, residential, and clinical settings. Prerequisite: SPED 775. LEC

SPED 876 Conferencing with Parents of Exceptional Children and Youth: (3). A course designed to develop knowledge and skills in the techniques of interviewing and conferencing, with special emphasis on promoting effective relationships between families and the professions. Prerequisite: SPED 425 or SPED 725. LEC

SPED 880 Coordination and Supervision of Services for Exceptional Children (3). An analysis of the role of the special education coordinator and supervisor, particularly in special education. Prerequisite: SPED 425 or SPED 725 and six additional semester hours in special education. LEC

SPED 890 Interdisciplinary Programming for Children and Youth with Disabilities (3). This course is designed to provide students a survey of disciplines which contribute to care and treatment of students with disabilities. Emphasis will be given to participative, participatory and participatory practices. Prerequisites include medicine, education, psychology, speech pathology, occupational therapy, physical therapy, musical therapy, and social work. Prerequisite: SPED 425 or SPED 725. LEC

SPED 896 Capstone Adaptive Program Seminar (3). This course is designed to be a culminating experience for Adaptive Program students who choose to complete their masters program with specialization in adaptive program instead of one of the other program options (i.e., project or thesis). Students will complete this course during the final semester of their programs. Participants will review current issues, evidence-based practices, home-school considerations, state and federal rules and regulations, and Kansas and federal laws and regulations for students with mild to moderate disabilities (i.e., Adaptive category designation). The course is a prerequisite for the departmental comprehensive examination in the Adaptive area. LEC

SPED 897 Independent Study (1-4). Prerequisite: Consent of adviser and instructor. RSH

SPED 898 Master's Project (1-4). RSH

SPED 899 Master's Thesis (1-6). THE

SPED 900 Advanced Application of Behavioral Management Techniques to Exceptional Children and Youth (3). Theory and principles of behavioral analysis. Emphasis will be given to recognition, measurement, recording, and visual display techniques. Other topics include maintenance and generalization of behavior change. Students will be provided experience in the design and carrying out of research methods and principles related to research methods and principles of behavioral analysis. Prerequisite: SPED 425 or SPED 725 and SPED 839. LEC

SPED 915 Advanced Curriculum Development for Children and Youth with Disabilities (3). This course is designed to provide principles of development, needs assessment, evaluation and dissemination applied to curriculum products. Analysis of organizational and conceptual features of major curriculum development projects for students with disabilities are addressed; participants design curriculum procedures. Prerequisite: Twelve semester hours in special education and a graduate concentration in special education. LEC

SPED 920 Management of Instructional Resources for Exceptional Children and Youth (3). Designed for individuals with responsibilities for the operation of instructional resource centers and educational programs serving exceptional children and youth. Emphasis will be given to consideration of methods and management of special education instructional media/materials and the delivery of in-service training specific to their skills. Prerequisite: Professional preparation and/or experience in the Education of Exceptional Children and C&I 616, Introduction to Educational Communications. LEC

SPED 925 Medical Aspects of Handicapping Conditions (3). The organization of this course follows the chronology of an individual's total development from genetic origin through fetal development, perinatal, infancy, childhood, and adolescence. Emphasis is given to etiology and implications of handicapping conditions on development. Attention is given to prevention, treatment, and habilitation or rehabilitation of various conditions. Prerequisite: SPED 725. LEC

SPED 949 Specialist Research (1-4). RSH

SPED 960 Education of Children and Youth with Disabilities: (3). This course is designed to prepare students to implement specialized alternative strategies for individualized group instruction. Methods for developing and implementing overall treatment/educational programs, planning or selecting curricula/service models for programs, and developing instructional materials are emphasized. Procedures for managing classroom staff and service resources, coordinating educational programs with families, other service personnel and program support staff, and monitoring overall program effectiveness are addressed. Prerequisite: SPED 760. LEC

SPED 970 Problems of Exceptionality: (3). An extensive analysis of the literature and research pertinent to issues in a given disability. Separate sections are organized for various disabilities. Students may enroll in more than one section as a culminating experience for a graduate program. Prerequisite: Three courses in special education or permission of instructor. LEC

SPED 971 Organization and Administration of Services for Children and Youth with Disabilities (3). This course is designed to prepare administrators and prospective administrators for organizing and administering educational programs for students with disabilities. Major topics include a review of current
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trends in special education, state and federal guidelines and regulations, legal and
financing aspects of special education, program planning, and administration of
special services. (Same as ELPS 895). Prerequisite: Nine hours of education includ-
ing educational psychology and SPED 725. LEC

SPED 972 Issues and Trends in Special Education I (2). This course is designed to
assist first-year special education doctoral students organize and synthesize a con-
ceptual and substantive map of the field of special education and introduce them to
corresponding faculty research interests and resources. Emphasis is placed on the
academic writing expectations and resources of the field, university, and depart-
ment, and on building a cohort of students to address common issues and to pro-
vide a foundation for peer support throughout the doctoral program. Prerequisite:
Admission to special education doctoral program or permission of instructor. LEC

SPED 973 Issues and Trends in Special Education II (2). This capstone seminar is
designed to assist advanced doctoral students synthesize information across a broad
range of current and historically significant special education issues and
trends in preparation for comprehensive examinations and future professional
roles. Substantively, its primary focus is issues and trends that affect the entire field
or cut across several areas of study and practice. Its secondary focus is significant
issues and trends that affect particular categorical or functional sub-areas of study
and practice within the field. Prerequisite: Completion of nine doctoral courses in
special education, including 4 of 6 departmental Core courses. LEC

SPED 974 Issues and Trends: Students with Learning Disabilities (3). This doc-
toral level course will explore current issues related to characteristics, educational
methods and curricula, and questions, problems, concerns and movements con-
ected to the education of children and youth with learning disabilities, emo-
tional/behavioral disorders and autism spectrum disorders. Prerequisite: Doctoral
program admission or permission of instructor. LEC

SPED 975 Advanced Practicum with Children and Youth with Disabilities: (1-10).
This course is designed to provide students an opportunity to engage in an extensive analysis of
the literature and research pertinent to critical issues in the field of learning and
behavioral/developmental exceptionality. Prerequisite: SPED 970 LD/BD Issues I, SPED 972
Trends and Issues in Special Education I. LEC

SPED 980 Advanced Topics: (1-3). A special course of study to meet current
needs of education professionals—primarily for post-master’s level students. LEC

SPED 981 Leadership and Systems Change (3). This course is designed to pro-
vide students with an overview of seminal leadership and systems change litera-
ture. Students analyze and apply the literature at the teacher, family, school build-
ing, district, state, and federal levels. Strategies for developing and mobilizing
stakeholder support for the process of change will be covered. Prerequisite: Ad-
mission to doctoral program. LEC

SPED 982 Preparing Future Faculty (3). This course is designed to give students an
introduction and overview of academic life and the roles and responsibilities of an
academic career. An important purpose is to help develop a realistic and
comprehensive picture of the expectations of academic life and the competencies required for a successful start in
an academic career. Organized around the broad themes of understanding the acad-
emy, faculty life and work, and academic career paths, course content addresses the roles and responsibilities that come with different types of positions and the is-
issues faculty face as they pursue their academic careers. The course offers an oppor-
tunity for students to critically review their doctoral program in the context of pre-
paring themselves for successful transition into an academic career and to explore options for academic careers choices. Prerequisite: Doctoral program admission. LEC

SPED 983 Proposal Development (3). This course is designed to teach a broad
array of strategies associated with the development of successful proposals that
will generate funds to support programmatic work. Among the topics covered in
this course are sources of funding, strategies for conceptualizing and writing pro-
posals, collaboration strategies, proposal peer-review process, and integrating
proposal development activities into other professional responsibilities. Prerequi-
site: Admission to doctoral program and PRE 710. LEC

SPED 984 School Reform and School Community Partnerships (3). This is an in-
terprofessional course in public policy and school reform that is concerned with
current policy and systems transformations in education and child/family serv-
ces, including educational, social and health service systems and the movement
toward school-linked service integration strategies and family partnerships, called the “community school” movement. Issues connected with comprehensive school reform including the role of special education and mental health in this process will be emphasized. Partial emphasis will be placed on urban, multicultural is-
issues affecting community schools. Prerequisite: Doctoral program admission or permission of instructor. LEC

SPED 985 Naturalistic Research (3). This course is designed to develop skills in
naturalistic or constructivist research, while situating it theoretically within the
broader framework of modern and postmodern social inquiry, and exploring its social,
political and ethical implications. The course develops students’ skills in using this form of interpretive qualitative research, provides a theoretical frame-
work for selecting inquiry paradigms, compares and contrasts positivist and con-
structivist inquiry, and reviews social and political implications of constructivist
inquiry. Prerequisite: Six hours of statistics, measurement, and/or large or small
group research design. LEC

SPED 986 Trends and Issues Associated with Online Instruction (3). The course examines the opportunities, challenges, cautions, and demands of web-based in-
struction in higher education. It explores the policy implications of web-based in-
struction, development of collaborative teaming skills utilizing telecommunica-
tion resources, and the design and technical aspects of online instruction. Particu-
lar attention is given to the implications of online instruction for accommodating
needs presented by diverse learners through strategies such as universal designs.
Prerequisite: Admission to doctoral program or permission of instructor. LEC

SPED 990 Small Sample Empirical Research Methods (3). This course provides a
detailed examination of research methods for advancing knowledge and validating
hypothetically useful treatments in situations in which sufficient sample sizes
to conduct formal experiments are lacking, the question of interest is better ad-
Addressed by multiple observations of treatment effects over time, and/or the ques-
tion is best addressed by taking a variety of observations of a single unit of inter-
test. Specifically, two small sample research methods will be examined in depth
with examples and practical application experience: interrupted time series design for small samples, (single case) design, and Yin’s empirical case study method.
Prerequisite: Doctoral program admission or permission of instructor. LEC

SPED 991 Family Outcomes in Special Education (3). This course focuses on ana-
lyzing and synthesizing research literature focusing on intermediate outcomes
(e.g., family-professional partnerships) and long-term outcomes (e.g., family qual-
ity of life) related to families of children, youth, and adults with disabilities. Key
family theories are discussed and applied in the development and implementa-
tion of interventions that have potential to increase intermediate and long-term
family outcomes. Prerequisite: Three courses in special education or permission of instructor. LEC

SPED 992 Seminar in Early Childhood/Intervention (3). This seminar explores re-
sistance to support evidence-based practices that currently exist in the areas of early
intervention and early childhood special education. The primary objective is to
learn how to read and critically analyze studies that form the evidence base for several early intervention and early childhood special education practices. Pri-
mary goals of the class include the development of skills for evaluating research
studies in early intervention and early childhood special education, and increas-
ing knowledge of evidence-based practices in the early intervention literature.
Prerequisite: Three courses in special education or permission of instructor. LEC

SPED 995 Field Experience in: (1-5). Supervised and directed experiences in
selected educational settings. Instructors conduct regular observations and con-
ference with students. Written summaries and evaluations of field experiences are
submitted with course grades. FLD

SPED 996 College Teaching Experience (2). This course is designed to prepare
students for college teaching. Enrolled students shall engage in semester-long,
planned, instruction that includes college classroom teaching under supervision.
Planning shall be done with a member of the faculty who will supervise the expe-
rience. FDL

SPED 997 Individual Study (1-4). Prerequisite: Prior graduate course work in the
area of study and consent of instructor. RSH

SPED 998 Seminar in: (1-4). LEC

SPED 999 Doctoral Dissertation (1-15). THE

Visual Art Education

See the School of Fine Arts chapter of this catalog.

Some departments do not offer all courses in any one semester. See the online Schedule of Classes at www.registrar.ku.edu for current course offerings.


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See pages 12-14 for admission procedures.

KU’s total research expenditures in fiscal year 2006 for all projects, including sponsored research, training, and service grants in all fields, were $292 million, a 3.9 percent increase over 2005.
Admission
Procedure
Admission requirements are the general KU requirements, with the following additions: one official copy of undergraduate transcripts, transcripts of any graduate work, and three letters of recommendation from references. Some departments require the Graduate Record Examination. Applications must be accompanied by a nonrefundable fee. See Admission in the General Information chapter of this catalog.

Baccalaureate Preparation
To qualify for graduate work in any field of engineering, a student generally must hold an accredited baccalaureate degree in that field and have a 3.0 grade-point average. A student with good preparation in such fields as mathematics, chemistry, or physics, or in a related engineering field, may be admitted on the basis of performance in specific undergraduate courses, determined by the department of interest to the prospective student. Undergraduate hours do not count as part of a student’s Plan of Study, but they must be completed with grades of B or higher.

Exceptionally qualified undergraduates may be admitted directly to a Fast-track Ph.D. program, which does not require the master’s as an intermediate degree. Students who wish to earn a Ph.D. and believe that they meet this criterion are encouraged to contact the graduate adviser in their field of interest.

English Proficiency Requirement
All graduate students in the School of Engineering who are required to take courses at the Applied English Center must pass the AEC’s English Proficiency Examination within three semesters of their initial enrollment. Failure to complete the English proficiency requirement within this time limit results in dismissal from the graduate engineering program.

Graduate Grade-point Average Requirement
In addition to completing a Plan of Study that is formally approved by his or her committee and other requirements appropriate to the graduate degree, a student must (1) attain and maintain at least a 3.0 grade-point average in all graduate courses and (2) attain and maintain at least a 3.0 grade-point average in all course work, including undergraduate courses taken to make up background deficiencies, except for courses taken at the Applied English Center.

Facilities
Engineering faculty members and graduate students are major users of the facilities and services of many research laboratories and centers across campus and among our research partners at other universities. The largest facilities are the university’s Designated Centers (DC):

- Center for Environmentally Beneficial Catalysis (DC)
- Information and Telecommunication Technology Center (DC)
- Transportation Research Institute (DC)
- Bioengineering Research Center
- Tertiary Oil Recovery Project
- Flight Research Laboratory
- Environmental Engineering and Science Research Laboratory
- Energy Research Center
- Infrastructure Research Institute
- Higuchi Biosciences Center
- Intelligent Systems Laboratory
- Center for Advanced Scientific Computing
- Center for Science Education
- Kansas Biological and Geological Surveys
- Institute for Policy and Social Research

See the Research and Academic Support chapter of this catalog for further information.

Degree Programs
The Master of Science degree is offered in aerospace engineering, architectural engineering, bioengineering, chemical engineering, civil engineering, computer science, electrical and computer engineering, engineering management, environmental engineering or science, information technology, mechanical engineering, petroleum engineering, and water resources science. The Master of Engineering is offered only in aerospace engineering.

The Department of Civil, Environmental, and Architectural Engineering offers the Master of Civil Engineering and the Master of Construction Management.

The school offers a Ph.D. degree in aerospace engineering, bioengineering, chemical and petroleum engineering, civil engineering, computer science, electrical engineering, engineering management, environmental engineering or science, information technology, mechanical engineering, petroleum engineering, and water resources science. Doctoral students interested in careers in research or teaching or both should consider the Ph.D. degree. Exceptionally qualified undergraduates may be admitted directly to a Fast-track Ph.D. program.

For students interested in careers in engineering design or engineering project management, the school offers programs leading to the Doctor of Engineering (D.E.) degree in aerospace engineering, civil engineering, electrical engineering, and mechanical engineering. For information on graduate studies in petroleum engineering, contact the Department of Chemical and Petroleum Engineering or the School of Business.

Application fees: Domestic students in engineering: paper $55, online $45.
International students in engineering: paper $60, online $55.

KU’s graduate program in aerospace engineering ranked 26th in the nation, according to U.S. News & World Report’s “America’s Best Graduate Schools” rankings for 2007.
Aerospace Engineering

Chair: Mark S. Ewing
Graduate Advisor: Saeed Farokhi
Learned Hall, 1530 West 15th St., Room 2120
Lawrence, KS 66045-7609, www.ae.engr.ku.edu, (785) 864-4267
Professors: Downing, Farokhi, Taghavi
Professors Emeriti: Muirhead, Roskam
Associate Professors: Barrett-Gonzalez, Colgren, Ewing, Hale
Assistant Professor: McLoughlin

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 online at www.graduate.ku.edu/GAPC. Send original transcripts of all completed college and university coursework to:

The University of Kansas
Graduate Application Processing Center
Strong Hall, 1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

Send all other requested application materials to:

The University of Kansas
Department of Aerospace Engineering
Learned Hall, 1530 West 15th St., Room 2120
Lawrence, KS 66045-7609

M.S. Degree Requirements

The M.S program has two options. The Thesis Option requires a minimum of 30 credit hours of graduate work including 6 hours earned in the satisfactory completion of a thesis. The Project Option requires a minimum of 33 hours of graduate work with an emphasis on an independent investigation that must include 3 hours of Special Problems, but a thesis is not required. The candidate must pass a final oral examination in which the thesis (or results of the independent investigation) is defended and the candidate demonstrates a working knowledge in aerospace engineering.

M.E. Degree Requirements

The M.E program emphasizes systems design and management skills rather than the more analytic equivalents of the M.S. program. The entrance requirements are the same as those for the M.S. program. A total of 36 semester credit hours is required, including 6 hours for a design project and 6 hours for an industrial internship. The candidate must pass an oral review of the design project.

Ph.D. Degree Requirements

The program normally includes 60 credit hours of course work beyond the B.S. and the equivalent of 15 hours on a dissertation. A minimum of 15 hours must be distributed in aerodynamics, structures and materials, dynamics and controls, design, and propulsion, with a minimum of one course in each area. An additional minimum of 15 hours of specialization is required in one area. At least 15 hours of graduate-level mathematics beyond the B.S. are required. Credit hours earned in completing a master’s degree can be used to satisfy a portion of these when appropriate. Unique situations can be accommodated with the approval of the graduate adviser and the candidate’s major professor.

In addition to general rules and regulations, a student must meet departmental Ph.D. requirements. After two semesters following the completion of M.S. requirements (or at a comparable level for non-M.S. students), the student is evaluated. To be allowed to continue for the Ph.D., the student must (1) have a minimum grade-point average of 3.5 in M.S. course work, (2) pass a qualifying examination, and (3) submit a Plan of Study.

The qualifying examination tests 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, astronautics, structures and materials, dynamics and controls, and propulsion. A student is allowed only two attempts to pass this examination.

After passing the qualifying examination, the aspirant forms an advisory/dissertation committee. This committee must have five members, including at least one from a department other than aerospace engineering. The committee approves the aspirant’s program and administers the comprehensive examination and the formal oral defense of the dissertation.

Transfer students admitted with M.S. degrees must take the qualifying examination and prepare a Plan of Study after the first semester but before the end of the second semester.

When the aspirant has completed most of the course work and satisfied the Foreign Language or Other Research Skills (FLORS) requirement, he or she must take the comprehensive examination. The first part must consist of a written research proposal outlining in some detail the work to be done for the dissertation. The second part is an oral examination in which she or he must defend the research plans and demonstrate competence in her or his particular and related areas. Upon passing the comprehensive examination, the aspirant becomes a candidate for the Ph.D. The dissertation committee directs preparation of the dissertation and approves it. A formal oral and public defense of the dissertation is required before the candidate’s committee, any other interested members of the graduate faculty, and the general public.

Students can satisfy the FLORS requirement by selecting and having approved by the committee chair one of these options:

Option 1. Aspirants whose dissertations are primarily theoretical must demonstrate proficiency in computer science and complete 3 hours of graduate courses in instrumentation or experimentation.

Option 2. Aspirants whose dissertations are primarily experimental must demonstrate proficiency in computer science and complete 3 hours of graduate courses in computational methodology.

Option 3. All aspirants can substitute a demonstration of reading proficiency in a non-native foreign language for the proficiency in computer science. This language must be one with a significant body of literature in the aspirant’s dissertation area. Some examples of experimental and computational courses are:

- AE 705 Structural Vibrations and Modal Testing
- AE 730 Advanced Experimental Fluid Dynamics
- AE 732 Introduction to Flight Test Engineering
- CE 721 Experimental Stress Analysis

Computational Courses:
- ECE 744 Digital Signal Processing I
- ME 861 Theory of the Finite Element Method
- MATH 781 Numerical Analysis I
- MATH 782 Numerical Analysis II
- MATH 783 Applied Numerical Methods for Partial Differential Equations

Note: Courses taken to satisfy the FLORS requirement cannot also be used to satisfy doctoral degree course requirements.

Two consecutive semesters, excluding summer sessions, must be spent in resident study. During the period of residence the student must be involved full-time in academic pursuits, which may include up to half-time teaching or research.

D.E. Degree Requirements

The Doctor of Engineering emphasizes systems design and management skills. Entrance requirements are the same as those for the Ph.D. program. Sixty hours of technical and management courses beyond the B.S. are required. These 60 hours must be distributed as follows:

1. At least 15 semester credit hours of graduate mathematics beyond the B.S.A.E. degree.
2. At least 15 semester credit hours must be taken in engineering management courses.
3. At least 15 semester credit hours of technical courses must be distributed in aerodynamics, structures and materials, dynamics and controls, design, and propulsion.
4. At least 15 semester credit hours of D.E. project.
Aerospace Engineering

In addition, 12 hours of industrial internship must be completed. Credit hours earned completing a master’s degree can satisfy a portion of these requirements when appropriate. Unique situations can be accommodated with the approval of the graduate adviser and the major professor.

In addition to general rules and regulations, a student must meet the following departmental requirements. After two semesters following completion of M.S. or M.E. requirements (or at a comparable level for non-M.S. or non-M.E. students), the student is evaluated. To be allowed to continue, the student must (1) have a minimum grade-point average of 3.5 on M.S. or M.E. course work, (2) pass a qualifying examination, and (3) submit a Plan of Study.

The qualifying examination tests the student’s breadth of knowledge and determines his or her ability to apply this knowledge to engineering design and management problems. The examination consists of four parts, covering design and management, mathematics, and two of the following five areas: aerodynamics, astronautics, structures and materials, dynamics and controls, and propulsion. A student is allowed only two attempts to pass this examination.

After passing the qualifying examination, the aspirant forms a project committee of at least five faculty members including at least one from engineering management. Where possible, an appropriate industrial adjunct professor will be a member. One member acts as the principal investigator and/or major professor. The committee approves the Plan of Study and administers the comprehensive examination and the oral defense of the project.

When the aspirant has completed most of the course work and satisfied the computer skill requirements, he or she must take the comprehensive examination. The first part must consist of a written project proposal outlining in some detail the work to be done for the project. The second part is an oral examination in which he or she must defend the project plans and demonstrate competence in his or her particular and related areas. Upon passing the comprehensive examination, the aspirant becomes a candidate for the D.E. 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.

Note: A course taken to satisfy the FLORS requirement cannot also be used to satisfy doctoral degree course requirements.

A 12-month continuous internship must be served in an industrial or governmental organization before assumption of the project responsibility. This internship must be under joint guidance of a preceptor, who is appointed to the adjunct faculty, and a regular faculty member. The internship requirement cannot be satisfied by working in any KU facility.

Because the internship is a degree requirement and because KU cannot guarantee internship employment, the student must indicate in writing, before completing the first semester as an aspirant for the degree and after passing the qualifying examination, how the internship requirement is to be satisfied. This can be a letter from the faculty adviser indicating a grant availability, notice of a project appointment or assignment, or a letter from a company or agency (U.S. or abroad) expressing willingness to sponsor the student in an internship.

### Aerospace Engineering Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>AE 507</td>
<td>Aerospace Structures I</td>
<td>3</td>
</tr>
<tr>
<td>AE 508</td>
<td>Aerospace Structures II</td>
<td>3</td>
</tr>
<tr>
<td>AE 509</td>
<td>Honors Aerospace Structures</td>
<td>3</td>
</tr>
<tr>
<td>AE 510</td>
<td>Aerospace Materials and Processes</td>
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<tr>
<td>AE 521</td>
<td>Aerospace Systems Design I</td>
<td>4</td>
</tr>
<tr>
<td>AE 522</td>
<td>Aerospace Systems Design II</td>
<td>4</td>
</tr>
<tr>
<td>AE 523</td>
<td>Space Systems Design</td>
<td>4</td>
</tr>
<tr>
<td>AE 524</td>
<td>Propulsion System Design</td>
<td>4</td>
</tr>
<tr>
<td>AE 545</td>
<td>Fundamentals of Aerodynamics</td>
<td>5</td>
</tr>
<tr>
<td>AE 546</td>
<td>Honors Aerodynamics</td>
<td>5</td>
</tr>
<tr>
<td>AE 550</td>
<td>Dynamics of Flight I</td>
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</tr>
<tr>
<td>AE 551</td>
<td>Dynamics of Flight II</td>
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</tr>
<tr>
<td>AE 552</td>
<td>Honors Flight Dynamics and Control</td>
<td>4</td>
</tr>
<tr>
<td>AE 560</td>
<td>Spacecraft Systems</td>
<td>3</td>
</tr>
<tr>
<td>AE 571</td>
<td>Fundamentals of Airplane Reciprocating Propulsion Systems</td>
<td>3</td>
</tr>
<tr>
<td>AE 572</td>
<td>Fundamentals of Jet Propulsion</td>
<td>3</td>
</tr>
<tr>
<td>AE 573</td>
<td>Honors Propulsion</td>
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<tr>
<td>AE 590</td>
<td>Aerospace Seminar</td>
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<tr>
<td>AE 592</td>
<td>Special Projects in Aerospace Engineering</td>
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<tr>
<td>AE 593</td>
<td>Honors Research</td>
<td>1-5</td>
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<tr>
<td>AE 670</td>
<td>Aerospace Propulsion III</td>
<td>3</td>
</tr>
<tr>
<td>AE 701</td>
<td>Structural Design</td>
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<tr>
<td>AE 702</td>
<td>Aerospace Structures I</td>
<td>3</td>
</tr>
<tr>
<td>AE 703</td>
<td>Aerospace Structures II</td>
<td>3</td>
</tr>
<tr>
<td>AE 704</td>
<td>Dynamics and Vibrations</td>
<td>3</td>
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<tr>
<td>AE 705</td>
<td>Structural Vibrations and Modal Testing</td>
<td>4</td>
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<td>AE 706</td>
<td>Aerospace Structural Loads</td>
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<td>AE 707</td>
<td>Aerospace Structures I</td>
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<td>AE 708</td>
<td>Aerospace Structures II</td>
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<tr>
<td>AE 709</td>
<td>Structural Composites</td>
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<tr>
<td>AE 710</td>
<td>Advanced Structural Composites</td>
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<tr>
<td>AE 721</td>
<td>Aircraft Design Laboratory I</td>
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<tr>
<td>AE 722</td>
<td>Aircraft Design Laboratory II</td>
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<tr>
<td>AE 723</td>
<td>Space Systems Design</td>
<td>4</td>
</tr>
<tr>
<td>AE 724</td>
<td>Propulsion System Design and Integration</td>
<td>3</td>
</tr>
<tr>
<td>AE 725</td>
<td>Numerical Optimization and Structural Design</td>
<td>3</td>
</tr>
</tbody>
</table>


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.

The Anschutz Library brings together scientific resources from many areas.
Bioengineering

Director: Paulette Spencer
Associate Director: Glen Marotz
Eaton Hall, 1520 West 15th St., Room 1
Lawrence KS 66045-7621
www.bio. engr. ku. edu, (785) 864-3881, fax (785) 864-5445

Cooperating Faculty: Professors: Barlow, Cheney, Cook, Dougherty, Gehrke, Grzymala-Busse, Lunte, Middaugh, Nudo, Ralston, Richter, Siahaan, Spencer, Topp, Vakser, Weatherley
Assistant Professors: Berkland, Chen, Clark*, Detamore*, C. Fischer, Kieweg, Laurence, McIlff, Myers, Peltier, Scurto, A. Zhang, Y. Zhang

The program offers Master of Science and Doctor of Philosophy degrees in bioengineering. The School of Engineering dean’s office on the Lawrence campus administers the program. Faculty members are from departments in the KU Schools of Engineering and Pharmacy, the College of Liberal Arts and Sciences, KU Medical Center, and the University of Missouri in Kansas City School of Dentistry.

Master of Science

Admission. Students apply to the bioengineering program online at www. graduate. ku. edu/GAPC, or print the form and mail or fax it to the address above. Admission decisions are made by individual track directors in collaboration with their colleagues and the other track directors. The associate dean for research and graduate programs is the final decision-maker.

The student follows one of six tracks: bioinformatics; biomechanics and neural engineering; biomaterials and tissue engineering; biomolecular engineering; biomedical products design and development; or bioimaging. Students complete a series of common courses, then choose from specific courses for each track.

The required curriculum for each program depends on the student’s undergraduate preparation, the degree of exposure to the research process, judgment of the student’s likely performance, and the requirements of the selected track. The required Introduction to Biomedical Engineering class develops foundational bioengineering and allows students to sample the breadth and depth of bioengineering efforts across all tracks.

Applicants should have a baccalaureate degree in engineering, biological science, physical science, or a related field. Successful applicants have strong academic credentials, some formal research experience, and potential for advanced study demonstrated by performance at the baccalaureate level.

Students accepted into the program must meet the standard admission requirements. In addition, students must meet the requirements listed under the respective degree programs in the following sections.

Students must meet the following requirements: have an overall undergraduate grade-point average of approximately 3.25 on a 4.0 scale; complete the personal statement on the program Web site, www.bio. engr. ku. edu, detailing how this program supports the candidate’s career goal(s); have a bachelor’s degree from an accredited post-secondary institution in engineering, the biological sciences, physical sciences, or a related field; submit Graduate Record Examination scores; and submit three letters of recommendation. Unless the applicant’s native language is English or the applicant has received a baccalaureate or higher degree from an accredited U.S. institution of higher education, the applicant must meet KU’s standard for the Test of English as Foreign Language. Applicants for graduate teaching assistantships must obtain a satisfactory score on the Test of Spoken English.

In addition, students must meet the following general course work requirements: mathematics courses through differential equations and linear algebra (MATH 220 or MATH 320 and MATH 123 or MATH 290 or equivalents) including one year of calculus-based physics (through PHYS 212 or the equivalent); one course in general chemistry (CHEM 125 or CHEM 184 or the equivalent); and one course in molecular/cell/human biology (BIOL 100 or BIOL 150 or the equivalent).

M.S. Degree Requirements. The program integrates studies in engineering and the biological sciences and provides depth in a particular research area. The degree prepares students for careers in private and public firms, government laboratories, and university settings. A thesis is required.

The M.S. in bioengineering is evidence of ability to work as an engineer and researcher capable of independent investigation who can present the results of that investigation cogently. The holder of the master’s degree has completed significant course work, a thesis that describes an independent investigation, and passed a final examination on the thesis research.

The program is rigorous and places high demands on the student. Students must demonstrate that they understand interdisciplinary concepts, are able to generate testable hypotheses, design experiments, and collect and analyze data, both independently and in team and interdisciplinary environments.

The degree aspirant works with an advisor from his or her selected track to develop a formal Plan of Study. The tracks encompass the major research and educational themes in the bioengineering degree program; each track has a director and affiliated faculty. The student selects from track courses to construct a comprehensive educational and research program that (a) takes advantage of the student’s background, (b) demonstrates academic and research skills, and (c) capitalizes on the strengths of the affiliated faculty.

Goals and Objectives. The general goals and objectives for the bioengineering master’s degree are to

1. Give students an in-depth understanding of mathematics, engineering principles, physics, chemistry, physiology, and modern biology;
2. Train students to apply basic sciences to biological problems using engineering principles;
3. Train students to do bioengineering research; and
4. Train students to apply bioengineering research to commercially viable problems.

Additional Undergraduate Preparation Required. Prerequisites include

Bioinformatics Track: The prospective student should have the following additional undergraduate preparation for the bioinformatics core. If not, the student should take the equivalent undergraduate KU course(s) to prepare for the bioinformatics track.
1. Proficiency in at least one applied programming language and Software Engineering Concepts. Equivalent KU class: EECS 448 (3)
3. Automata Theory, Grammars, Theory of Computability. Equivalent KU class: EECS 510 (3)

Bioengineering integrates studies in engineering and the biological sciences and provides depth in a particular research area.
Bioengineering

4. Probability and Statistics. Equivalent KU class: MATH 526 (3)

Biomechanics and Neural Engineering Track:
- MATH 365 or MATH 465 Statistics (or equivalent) (3)
- CE 201/ME 201 Statics (3), ME 420 Mechanisms (3), ME 311 Mechanics of Materials (3), or ME 633 Basic Biomechanics (as part of the graduate program) (3)
- ME 208/EECS 138/CP&E 121 Computer Programming (or equivalent) (3)
- ME 455 Instrumentation (or equivalent) (3)
- ME 510 Fluid Mechanics/CP&E 511 Momentum Transfer (3) or ME 756 Biofluids (as part of the graduate program) (3)

Biomaterials and Tissue Engineering: Students must complete the following undergraduate course: ME 306 Science of Materials (or equivalent) (3)

Biomechanical Design and Development Track: Students must complete the following undergraduate courses: ME 306 Science of Materials (or equivalent) (3) or ME 765 Biomaterials (as part of the graduate program) (3)

Doctoral Degree Requirements.

The Ph.D. degree in bioengineering is evidence of ability to work as an engineer and researcher who demonstrates excellence in scientific research and continued intellectual leadership as an independent researcher. The holder of a Ph.D. degree has completed a rigorous set of track courses and courses outside of the track and has pursued a focused research project. A dissertation is required.

The program is rigorous and places high demands on the student. Students must demonstrate that they understand interdisciplinary concepts, are able to generate testable hypotheses, design experiments, and collect and analyze data, both independently and in team and interdisciplinary environments.

The program provides knowledge breadth in engineering and the biological sciences and knowledge depth in a particular research area. The degree prepares students for careers in private and public firms and in university settings.

The aspirant works with an adviser from his or her selected track to develop a formal Plan of Study. The tracks encompass the major research and educational themes in the bioengineering degree program; each track has a director and affiliated faculty. The student selects from track courses to construct a comprehensive educational and research program that (a) takes advantage of the student’s background, (b) demonstrates academic and research skills, and (c) capitalizes on the strengths of the affiliated faculty.

Goals and Objectives. The general goals and objectives for the bioengineering Ph.D. degree are to

1. Give students an in-depth understanding of mathematics, engineering principles, physics, chemistry, anatomy and physiology, computation, and modern biology
2. Train students to apply basic sciences to medical and biological problems using engineering principles
3. Train students to recognize and provide engineering solutions to clinical problems
4. Train students to research bioengineering problems
5. Train students to apply bioengineering research to commercially viable problems; it can be taken a minimum of twice.
6. Train students to teach bioengineering at the graduate and undergraduate levels.

Additional Undergraduate Preparation Required. Prerequisites include

Bioinformatics Track: The prospective student should have the following additional undergraduate preparation for the bioinformatics track. If not, the student should take the equivalent undergraduate KU course(s) to prepare for the bioinformatics track.
1. Proficiency in at least one applied programming language and Software Engineering concepts. Equivalent KU class: EEC 446 (3)
3. Automata Theory, Grammars, Theory of Computability. Equivalent KU class: EEC 510 (3)
4. Probability and Statistics. Equivalent KU class: MATH 526 (3)

Biomaterials and Neural Engineering Track: Students must complete the following undergraduate courses: MATH 365 or MATH 465 Statistics (3) ME 201/CE 201 Statics (3), ME 420 Mechanics (3), ME 311 Mechanics of Materials (3), or ME 633 Basic Biomechanics (as part of the graduate program) (3) ME 306 Science of Materials (3) or ME 765 Biomaterials (as part of the graduate program) (3) ME 208 Computer Programming (or equivalent) (3) ME 501/6/765/645 Instrumentation (or equivalent) (3)

Biomolecular Engineering: Students with deficiencies in critical areas may be required to complete additional courses in preparation for the qualifying examination. This includes deficiencies in any of the Ph.D. prerequisites for admission. Depending on the research project and the student's background, the adviser may recommend additional remedial courses. Examples include CHEM 622/CHEM 624/CHEM 625 Organic Chemistry (2-3) ENGR 801 Issues in Scientific Integrity (1)

Ph.D. Course Work, Common Core Courses (6 hours)
C&P 756 Introduction to Biomedical Engineering .......................................................... 3 ENGR 800 Bioengineering Colloquium (0.5 hrs/semester (four semesters required) .... 2 ENGR 801 Issues in Scientific Integrity ............................................................................. 2

Track Courses (21-36 hours). Students must complete the number of hours required in the track they have chosen, plus a minimum of 18 dissertation hours (a maximum of 24 dissertation hours is permitted). The total number of hours for degree completion varies by track; a typical minimum is 60.

Bioinformatics: One track course, five elective courses from informatics, six elective courses from natural science and mathematics
Bioinformatics and Neural Engineering: Five track courses, one advanced engineering, one life sciences, two mathematics/statistics/numerical methods course, two elective courses
Biomedical Product Design and Development: Six track courses, one advanced engineering, one pharmaceutica & life sciences, one math/statistics, two elective courses
Biomaterials and Tissue Engineering: Three track courses, four or more elective courses

Examinations. Three examinations are part of the Ph.D. curriculum. Successful completion of the qualifying and comprehensive examinations admits the student to Ph.D. candidacy. The dissertation defense is the final examination.

Qualifying Examination. The qualifying examination normally is taken after completion of the majority of the track course work (typically within the first year). The qualifying examination can serve as an entrance examination for the Ph.D. exami- nation. It can be taken a minimum of twice.

Comprehensive Examination. The comprehensive examination ensures that the student has potential to become an independent investigator. The skills demonstrated are those necessary to obtain funding for research and development in academia, government, and industry; they are expected to be highly developed. The comprehensive examination determines the soundness, significance, and originality of the student's research project and tests the clarity and thoroughness of the student's understanding. It provides an opportunity for the student to justify his or her research, to describe the initial research plan, and present preliminary data on the basis. If the student misses the examination three times, the student must withdraw from the program. It provides an opportunity for the student to justify his or her research, to describe the initial research plan, and present preliminary data on the basis.

The student must take the comprehensive examination after passing the qualifying examination, completing the research skills requirement, and before the dissertation is written. The dissertation examination begins typically, a doctoral advising committee formed before the examination administers it. Before the examination, the student must submit in writing to the committee a detailed research proposal for a Ph.D. dissertation project. The student is examined on the proposal and on knowledge and insight in the specialization.

The examining committee consists of five or more members of the graduate faculty. The student is examined on the proposal and on knowledge and insight in the specialization.

Chemical and Petroleum Engineering

Chair: Laurence Weatherley, lweather@ku.edu
Learned Hall, 1530 West 15th St., Room 4132
Lawrence, KS 66045-7609, www.cpe.ingr.ku.edu, (785) 864-4965
Graduate Adviser: Marylee Southard, 4132 Learned Hall, (785) 864-3868

Graduate Recruiting Director: 4132 Learned Hall, (785) 864-4965
Professors: Davis, Gehrke, Green, Nguyen, Subramaniam, Vossoughi, Weatherley, Willhite
Professors Emeriti: Bishop, Locke, Maloney, Mesler, Preston, Rosson, Swift
Associate Professors: Camarda, Howat, Liang, Nordheden, Ostermann, Southard, Stagg-Williams
Assistant Professors: Berkland, Detamore, Guzman, Scufo
Associate Scientists: McCoil, Tsau
C&P graduate programs provide an in-depth academic understanding of chemical engineering and petroleum engineering for students who plan careers in academia, research, or development. The department offers the M.S. degree in chemical engineering and petroleum engineering and the Ph.D. degree in chemical and petroleum engineering. See the General Information chapter of this catalog for requirements for admission and degrees.

In the master's programs, the primary emphasis is on formal course work in engineering and related subjects. Students take a sequence of core courses in heat, mass and momentum transport, thermodynamics, reaction kinetics, applied mathematics, reservoir engineering, and petroleum recovery.

In the doctoral program, the focus is on an independent research project in a significant engineering area. Specific Ph.D. course work depends on that specialization. Specializations reflect the research interests of the faculty. In addition to specialized courses in the department, advanced courses in mathematics and computer science, life sciences, physical sciences, and other branches of engineering may be used to prepare the Ph.D. student for the research project.

These guidelines include departmental requirements and are intended to assist the student and advisory committee in preparing a Plan of Study for the graduate degree.

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**Admission**

Admission is by approval of the department’s graduate faculty on recommendation by the graduate standards committee. Admission is based on demonstrated potential to complete a graduate degree successfully. The measures of performance used in the decision process are undergraduate and graduate grade-point averages, research performance, letters of recommendation, and Graduate Record Examination scores. A student who has not received a degree from a university in an English-based nation also must submit scores from the Test of English as a Foreign Language or International English Language Testing System and is expected to meet general KU requirements.

Admitted students with baccalaureate degrees in chemical or petroleum engineering usually are able to enroll in the graduate core courses listed below. Students with degrees in other branches of engineering or in mathematics, chemistry, physics, or other sciences usually must take some undergraduate course work to provide the necessary background for the graduate courses.

Submit your application online at www.graduate.ku.edu/GAPC. Send original transcripts of all college and university course work to

**The University of Kansas**
Graduate Application Processing Center
Strong Hall, 1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

Send all other requested application materials to

**The University of Kansas**
Department of Chemical and Petroleum Engineering
Learned Hall, 1530 West 15th St., Room 4132
Lawrence, KS 66045-7609

**M.S. Degree Requirements**

For an M.S. in chemical engineering, the undergraduate prerequisite courses are C&PE 511, C&PE 512, C&PE 521, C&PE 523, and C&PE 524. For an M.S. in petroleum engineering, the undergraduate prerequisite courses are C&PE 511, C&PE 521, C&PE 527, and C&PE 618. Depending on a student’s academic background and proposed Plan of Study, additional undergraduate prerequisite courses may be required. Up to 3 credit hours of the undergraduate prerequisite courses (numbered 500 or above) may be counted toward the M.S. degree as elective hours.

Before the end of the first semester of M.S. study, each student, with the help of the graduate adviser and the research director, must submit a Plan of Study to the associate dean for research and graduate programs.

Two degree options are available for the M.S. degree in chemical engineering:

**Option A** requires a minimum of 30 credit hours including the graduate core (15 hours) and submission and successful oral defense of a research thesis for 6 hours of credit. Students admitted to this option are considered for research assistantships, teaching assistantships, and fellowships.

**Option B** requires a minimum of 33 credit hours including the graduate core (15 hours). This option does not require a thesis but does require a written report 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 for graduation. Only the first 6 hours of enrollment in C&PE 803 meet degree requirements.

The following tables represent typical plans of study that might be established by a student and adviser. Only rarely are exceptions in C&PE course work allowed. It is recommended that part of the elective hours be from other departments. For petroleum engineering, if a student has not completed an advanced-level, reservoir-related course in geology as an undergraduate, such a course must be taken as one of the electives. GEOL 535 Petroleum and Subsurface Geology is recommended.

**M.S. in Chemical Engineering: Option A**

<table>
<thead>
<tr>
<th>Chemical Engineering Graduate Core Courses (15 hours)</th>
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<tbody>
<tr>
<td>C&amp;PE 701 Methods of Chemical and Petroleum Calculations</td>
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<tr>
<td>C&amp;PE 721 Chemical Engineering Thermodynamics</td>
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<tr>
<td>C&amp;PE 722 Kinetics and Catalysis</td>
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<tr>
<td>C&amp;PE 731 Convective Heat and Momentum Transfer</td>
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<tr>
<td>C&amp;PE 732 Advanced Transport Phenomena II</td>
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<tr>
<th>Research (9 hours)</th>
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<tbody>
<tr>
<td>C&amp;PE 800 Seminar</td>
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<tr>
<td>C&amp;PE 803 Research</td>
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<td>Thesis</td>
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<tr>
<th>Oral Examination</th>
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**Electives (6 hours)**

| M.S. in Chemical Engineering: Option B**

<table>
<thead>
<tr>
<th>Chemical Engineering Graduate Core Courses (15 hours)</th>
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<tr>
<th>Electives (15 hours)</th>
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<tbody>
<tr>
<td>No more than two courses numbered below 700. No more than three courses in Engineering Management or Business or both</td>
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<tr>
<th>Research (9 hours)</th>
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<tbody>
<tr>
<td>C&amp;PE 825 Graduate Problems in Chemical and Petroleum Engineering</td>
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**M.S. in Petroleum Engineering**

<table>
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<tr>
<th>Petroleum Engineering Graduate Core Courses (12 hours)</th>
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<tbody>
<tr>
<td>C&amp;PE 701 Methods of Chemical and Petroleum Calculations</td>
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<tr>
<td>C&amp;PE 731 Convective Heat and Momentum Transfer</td>
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<tr>
<td>C&amp;PE 771 Advanced Reservoir Engineering</td>
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<tr>
<td>C&amp;PE 795 Enhanced Petroleum Recovery</td>
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<th>Oral Examination</th>
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**Electives (9 hours)**

**Ph.D. Degree Requirements**

**Admission.** Admitted students usually complete the M.S. in chemical or petroleum engineering before they pursue the Ph.D. Students with a completed M.S. degree take the graduate core courses and/or corresponding qualifying examinations based on their previous course work and training, as specified by the graduate standards committee.

An M.S. student in the thesis option (Option A) may apply for a change of status to Ph.D. aspirant if the student (1) has achieved...
a grade-point average of 3.6 or higher in the graduate core, (2) has
earned no C grades in the graduate core, and (3) has passed the
preliminary examination of research. These criteria are evaluated
during the third semester of residence by the department’s gradu-
ate faculty on recommendation of the graduate standards com-
mittee. Students who do not meet these criteria must complete
the M.S. degree before applying to the Ph.D. program.

In some cases, a student may be admitted directly to the Ph.D.
program without an M.S. degree. Such admission normally is
granted only when the applicant has clearly demonstrated excep-
tional performance in an undergraduate program and in any grad-
uate work. Students who are admitted to the Ph.D. degree pro-
gram and who do not complete an M.S. degree in chemical and pe-
elogical engineering generally must satisfy the same grade-point
average and preliminary examination requirements for Ph.D. aspi-
rant status as students admitted to the M.S. program, or they com-
plete the M.S. degree before readmission to the Ph.D. program.

Preliminary Examination of Research. The preliminary examina-
tion is administered to students requesting admission to the Ph.D.
program without earning the M.S. degree. Students taking this ex-
amination must have (1) completed the graduate core courses at
KU (five in chemical engineering, four in petroleum engineering)
with a grade-point average of 3.6 or higher and no C grades and
(2) worked with a C&PE adviser at least two semesters on a single
research project. Successful completion of the preliminary exami-
nation admits the student into the Ph.D. program with Ph.D. aspi-
rant status. The examination determines the student’s aptitudes for
(a) independent, original, critical thinking;
(b) Planning and organizing a research program;
(c) Use of previous work and background literature to demonstrate under-
standing of the planned research within the scope of the larger project and
ability to conduct that research;
(d) Application of fundamental theory (e.g., equations) to the proposed work;
(e) Effective communication of technical work.

The preliminary examination consists of a written report
(five pages maximum), oral presentation (15 minutes maximum),
and questions by the examining committee (25 minutes maximum).
The written and oral portions are prepared by the student only,
with no review or editing by the research adviser or any other
person. The written report is submitted to the committee one
week before the oral examination. Questions are directed to-
ward determining the five aptitudes listed above. Because this
is not a mandated activity of the university or the school, the
student’s graduate adviser is responsible for its execution.

The examining committee consists of the members of the stu-
dent’s thesis committee plus a member of the C&PE faculty not
already on the student’s research committee. There are three pos-
sible outcomes: Pass, Pass with Restriction (one aptitude of the five
is deficient), and Fail (two or more aptitudes are deficient). Pass
with Restriction status must be corrected by actions set and doc-
umented by the examining committee within the same academic
semester. Fail status requires the student to retake the preliminary
examination within four months of the initial examination. The
examination can be repeated once. A second failure automatically
transfers the student to the M.S. program. Students who do not
pass the preliminary examination are not eligible to take qualify-
ing examinations until they have passed the M.S. thesis defense.

Qualifying Examinations. Students entering the Ph.D. program
with the M.S. degree must show competence in the areas of the
graduate core: computation, transport phenomena, thermody-
namics, and kinetics (chemical engineering option); and computa-
tion, transport phenomena, reservoir engineering, and enhanced
resource recovery (petroleum engineering option). Students take a
qualifying examination over each graduate core course the first
time it is offered after they complete the course, or within the first
year of Ph.D. study, as appropriate. Qualifying examinations are
only open to students who already hold the M.S. degree.

Each qualifying examination normally is written and graded
by the instructor who last taught the course and is of equivalent
difficulty to the final examination for that course. A qualifying
examination is waived for a student who completes the gradu-
ate core course in that subject at KU with a grade of A or with a
grade of B and a B+ on the final examination. Other waivers may
be made at the discretion of the graduate standards committee.

The graduate standards committee evaluates competence,
taking into account student performance in courses and qualify-
ing examinations. Possible decisions are
(a) A student becomes a Ph.D. aspirant.
(b) A student who does not pass a portion of the qualifying examination must
repeat 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 recommenda-
tion to the departmental faculty about the student’s status.
(a) If performance has been satisfactory, the committee recommends that the
student be designated a Ph.D. aspirant.
(b) If performance has been clearly unsatisfactory, the committee recommends
that the student be dropped from the program.

Once a student has been designated a Ph.D. aspirant, it is the
responsibility of the Ph.D. advisory committee to monitor progress.

Ph.D. Advisory Committee. An advisory committee of four or
more faculty members is formed for each student when the stu-
dent is designated a Ph.D. aspirant. The research director nor-
mally serves as the committee chair. The committee works with
the aspirant to develop an appropriate overall Plan of Study
and monitors the progress of the student throughout the re-
mainder of the Ph.D. program.

Plan of Study and Foreign Language or Other Research Skills
Requirement. A formal Plan of Study is drawn up, approved by
the advisory committee, and submitted to the associate dean for
research and graduate programs.

Credit hours for the Ph.D. degree normally consist of 15
hours of course work beyond the graduate core and 30 to 34
hours of research work as specified in the following table:

<table>
<thead>
<tr>
<th>Ph.D. in Chemical and Petroleum Engineering</th>
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<tbody>
<tr>
<td>Ph.D. Courses (15-18 credit hours)</td>
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<tr>
<td>C&amp;PE 800 Seminar</td>
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<tr>
<td>C&amp;PE electives</td>
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<tr>
<td>C&amp;PE 902 Preparation for the Ph.D. Complete Examination</td>
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<tr>
<td>C&amp;PE Research (30-34 credit hours)</td>
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<tr>
<td>C&amp;PE 825 Graduate Problems in Chemical and Petroleum Engineering (optional)</td>
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<tr>
<td>C&amp;PE 904 Research</td>
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The Kurata Thermodynamics Laboratory is a research facility in the Department of Chemical
and Petroleum Engineering.

The university’s Tertiary Oil Recovery Project has been named as one of the most significant
for the state’s economy.
The following guidelines apply in selection of course work.

1. Enrollment in the C&PE seminar (C&PE 800) every semester in residence, usually for 1 credit hour. Students who are required to attend another seminar to satisfy a fellowship or research program requirement may enroll in both seminars for 0.5 credit hour each. Any schedule conflicts should be discussed with both seminar coordinators.

2. Enrollment in at least three graduate-level C&PE courses. These do not include C&PE 902 Preparation for the Ph.D. Comprehensive Examination or any graduate seminars. All courses in the C&PE department that count toward the Ph.D. degree must be numbered 700 or above.

3. Enrollment in at least two courses (normally 6 hours) numbered 700 or above outside the department.

4. For non-KU students, the KU equivalents of courses that have already been counted toward another degree do not count toward the Ph.D. degree.

5. Normally C&PE 825 Graduate Problems in Chemical and Petroleum Engineering 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 hours is allowed as course credit.

These guidelines aid in preparing the program for most Ph.D. students. However, there may be exceptions, arising from the student’s academic background and the type of research, when the selection of courses may not adhere to these guidelines. In such exceptional cases, the student’s Ph.D. program must have the approval of the graduate standards committee.

Students must complete a Foreign Language or Other Research Skills (FLORS) requirement based on the research specialization chosen. Work done to fulfill this requirement should involve study in an area complementary to the selected research and should enhance the student’s ability to conduct or to research the FLORS requirement. The examination consists of two parts: a written proposal for research and an oral examination based on, but not limited to, the research proposal.

For the research proposal, the student is assigned a topic of current interest to the chemical and/or petroleum engineering profession. This assignment is made by an examining committee of at least five persons, including the advisory committee and at least one person outside the department. The aspirant identifies a research problem in the assigned topic area and prepares a written proposal for research on this problem. Normally, the written proposal must be prepared over a specified time period of 30 consecutive days. Except in unusual circumstances, the problem must be distinctly different from the dissertation problem.

The examining committee evaluates the research proposal upon completion. If the committee judges it satisfactory, the oral examination part of the comprehensive examination is held. The oral examination is based on the research proposal but also may cover areas peripheral to the proposal.

A student must pass both parts of the examination. Failure of either part constitutes an Unsatisfactory grade on the entire examination. An aspirant who receives a grade of Unsatisfactory may repeat the examination upon the recommendation of the examining committee, but under no circumstances may it be taken more than twice. The examination may not be repeated until at least 90 days have elapsed since the unsuccessful attempt.

To prepare the aspirant for the comprehensive examination, the advisory committee may require enrollment in C&PE 902 Preparation for the Ph.D. Comprehensive Examination 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 prescribed time constraints. Upon acceptance of the dissertation by the advisory committee, the candidate defends the dissertation in a final oral examination. The examining committee consists of at least five persons, including the advisory committee members and at least one person from outside the department.

### Chemical and Petroleum Engineering Undergraduate Courses

- 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 231 Material and Energy Balance
- C&PE 221 Basic Engineering Thermodynamics
- C&PE 311 Momentum Transfer
- C&PE 312 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 613 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 626 Chemical Engineering Laboratory II
- C&PE 627 Petroleum Production
- C&PE 628 Petroleum Engineering Design
- C&PE 629 Petroleum Engineering Laboratory II
- C&PE 651 Undergraduate Problems
- C&PE 654 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 601 Undergraduate Topics in Chemical and Petroleum Engineering (1-4).
- C&PE 612 Environmental Assessment of Chemical Processes (3).
- C&PE 613 Chemical Engineering Design I (4).
- C&PE 614 Reaction Engineering for Environmentally Benign Processes (3).
- C&PE 615 Introduction to Process Dynamics and Control (3).
- C&PE 616 Chemical Engineering Laboratory I (3).
- C&PE 617 Drilling and Well Completion (3).
- C&PE 618 Secondary Recovery (4).
- C&PE 619 Petroleum Engineering Laboratory I (2).
- C&PE 623 Chemical Engineering Design II (2).
- C&PE 624 Plant and Environmental Safety (3).
- C&PE 626 Chemical Engineering Laboratory II (3).
- C&PE 627 Petroleum Production (3).
- C&PE 628 Petroleum Engineering Design (3).
C&PE 629 Petroleum Engineering Laboratory II (2).
C&PE 651 Undergraduate Problems (1-6).
C&PE 654 Biocatalysis (3).
C&PE 655 Introduction to Semiconductor Processing (3).
C&PE 656 Introduction to Biomedical Engineering (3).
C&PE 657 Polymer Science and Technology (3).
C&PE 661 Undergraduate Honors Research (3).
C&PE 678 Applied Optimization Methods (3).
C&PE 701 Methods of Chemical and Petroleum Calculations (3). The utilization of advanced mathematical methods and computing techniques in the solution of problems in these fields.
C&PE 710 Subsurface Methods in Formulation 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 535 or C&PE 517 or consent of instructor. LEC
C&PE 712 Environmental Assessment of Chemical Processes (3). A discussion and presentation of the obligations and potential rewards associated with the development of biological substitutes to restore, maintain and improve tissue functions and methods of engineering and life sciences toward understanding and development of analogies; transport properties from kinetic theory of gases viewpoint; introduction to numerical methods. Prerequisite: ME 610/C&PE 511 and ME 612/C&PE 524 or equivalent. LEC
C&PE 714 Reaction Engineering for Environmentally Benign Processes (3). Principles of reaction engineering and green chemistry applied to processes of the future. With a careful introduction to the design and optimization of catalytic processes and reaction systems, focus will be on key reaction engineering concepts, including catalysis, mechanisms, reaction kinetics, heterogeneous reactions, reactor types and economic evaluation. Emphasis will be placed on understanding of chemical, biological and molecular concepts, and will develop and design processes from the micro level to the macro level. A final research paper is required. LEC
C&PE 715 Topics in Chemical and Petroleum Engineering: (1-4). Study in various branches of Chemical and Petroleum Engineering on topics that may vary from year to year. IND
C&PE 721 Chemical Engineering Thermodynamics (3). Chemical engineering applications of advanced thermodynamics and physical chemistry. Prerequisite: C&PE 512 LEC
C&PE 722 Kinetics and Catalysis (3). Modeling and analysis of chemical reactors with emphasis on reaction engineering. Introduction to heterogeneous catalysis. Prerequisite: General Chemistry.
C&PE 725 Molecular Cell Biology (3). Fundamentals and advanced concepts in cell biology and the molecular interactions responsible for cell functions, homeostasis and disease will be presented. Current analytical methods for examining cells and their molecular components will be discussed. Emphasis will be placed on the chemical and physical properties of individual proteins, nucleic acids and lipids and their assembly into cellular and subcellular structures. (Same as PFCH 725) Prerequisite: Graduate standing or consent of instructor. LEC
C&PE 731 Convective Heat and Momentum Transfer (3). The formulation and solution of steady and unsteady-state 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 751A Basic Rheology (3). Basic rheology including classification of classical bodies based on their strain tensor and solutions of the constitutive 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. LEC
C&PE 752 Tissue Engineering (3). An introduction to the rapidly growing and continuously evolving field of tissue engineering. Tissue engineering applies principles and methods of engineering and life sciences toward understanding and development of biological substitutes to restore, maintain and improve tissue functions. In this course, students study the basic science, engineering and medicine required for tissue engineering, learn state-of-the-art technology and practice, and create a literature-based proposal for a tissue engineered medical product. Prerequisite: Senior or graduate standing in engineering, or consent of instructor. LEC
C&PE 753 Introduction to Electrochemical Engineering (3). Basic principles of electrochemical engineering as they are applied to energy conversion and storage devices, industrial electrolytic processes and corrosion. Areas covered range from electrochemical fundamentals, thermodynamics, ionic phase equilibria, electrolyte and ion mass transport to mathematical modeling of electrochemical systems. Prerequisite: Graduate standing; C&PE 511, C&PE 512, C&PE 524 or equivalent; knowledge of a programming language. LEC
C&PE 755A Introduction and advanced topics in biocatalysis with focus on enzymatic reactions. Enzymology will provide the fundamental basis for discussion of kinetics and bio-process development. Advanced topics include: enzymes in non-aqueous solvents, immobilization techniques, whole-cell transformations, bio-reactors. Knowledge of the theoretical basis for these techniques and processes will be demonstrated within a class project. LEC
C&PE 755 Introduction to Semiconductor Processing (3). An overview of various processes to fabricate semiconductor devices and integrated circuits. Topics covered include crystal growth, oxidation, solid-state diffusion, ion implantation, photolithography, chemical vapor deposition, LPCVD, plasma etching, metallization, and plasma etching of thin films. A term paper on an approved topic of fabrication referenced current peer reviewed literature is required. LEC
C&PE 758 Introduction to Biomedical Engineering (3). The graduate elective form of C&PE 358. Additional assignments. Prerequisites with the graduate-level course designation are required for this section. Prerequisite: Graduate-level standing in Engineering, or consent of instructor. LEC
C&PE 765 Corrosion Engineering (3). Electrochemical basis of corrosion. Types of corrosion and corrosive atmospheres. Corrosion control measures and industrial practices. Prerequisite: ME 336 or CHEM 188. LEC
C&PE 771 Advanced Reservoir Engineering (2-3). Physical principles of petroleum production; gas drive performance; partial water drive performance; pressure maintenance through gas and water injection. Prerequisite: C&PE 527. LEC
C&PE 778 Applied Optimization Methods (3). Study of methods for solving optimization problems encountered in engineering and the natural sciences, with specific applications illustrating analytical and numerical techniques. Topics covered include gradient methods, penalty functions, linear programming, nonlinear and integer programming, stochastic optimization approaches, and treatment of constrained problems. Homework problems involving theoretical concepts and a theoretically-based semester project are required. LEC
C&PE 790 Introduction to Flow in Porous Media (3). Generalized Darcy’s law, vector equations of partial differential equations with 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 processes. Prerequisite: C&PE 527. LEC
C&PE 798 Phase Equilibrium (3). A study of phase behavior and equilibrium from a molecular perspective. Focus will be on vapor-liquid, liquid-liquid and solid-liquid equilibrium with advanced topics in compressed and supercritical fluids, petroleum applications, ionic solutions and others. LEC
C&PE 800 Seminar (0.50-1). 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 presentations 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. Graded on a satisfactory/unsatisfactory basis. 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 802 Preparation for the Ph.D. Comprehensive Examination (1-4). A study of improved oil recovery processes such as miscible displacement, microemulsion displacement, and thermal processes. Prerequisite: C&PE 527. LEC
C&PE 810 Research (1-6). For Ph.D. candidates. THE
C&PE 814 Petroleum Management Seminar (1). Structure, operation, and problem solving in the petroleum industry. 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 897 Advanced Topics in Process Modeling Simulation or Control: (1). Advanced topics in process modeling and control, or simulation, or control, or their application. Topic, credit, and other restrictions subject to approval of student’s advisory committee. Prerequisites vary, may vary from year to year. LEC
C&PE 898 Advanced Topics 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. THE
C&PE 912 Teaching College Level Engineering and Science Practicum (1). Future university instructors learn how to critically examine course content and teaching strategies, and prepare courses that will address the learning needs of the diverse student populations of the future. Students participate in workshops and symposia, as well as a teaching practicum experience during this course. LEC
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&E 933 Heat and Mass Transport in Porous Media (3). A study of industrial problems involving heat and mass transport in porous media such as packed columns, catalyst beds, chemical reactors, and petroleum reservoirs. Mechanisms of interphase and intraphase transport, diffusion, and dispersion. Included are methods of solution of the describing differential equations. LEC

C&E 934 Heat Transport with Phase Change (3). A fundamental treatment of heat transfer occurring during boiling and condensation. Included are nucleate and film boiling, film and dropwise condensation, and two-phase flow. LEC

C&E 936 Industrial Separation Processes (3). Determination and treatment of vapor-liquid separations, including methods for obtaining and treating equilibrium data, procedures for calculating multi-component separations by distillation, absorption, extraction, and adsorption. LEC

C&E 937 Applied Rheology (3). Industrial applications of fluid mechanics including compressible flow, flow of non-Newtonian fluids, flow of drag reducing systems all to be considered in laminar and turbulent flow regimes, and within conduits, and porous media. LEC

C&E 939 Advanced Topics in the Transport Phenomena: _____. (1-4). Advanced study in various branches of transport phenomena on topics which may vary from year to year. LEC

C&E 940 Data Analysis in Engineering and Natural Sciences (3). Statistical inference and data analysis, emphasizing interpretation of observations from areas of engineering and natural sciences where controlled experimentation is not possible. The basics of elementary statistics and matrix algebra are covered, followed by topics in time, series analysis, map analysis, including automatic contouring, and multivariate procedures such as principal components, discrimination and factor analysis. A suite of computer programs is provided. Students are encouraged to use data from their own graduate research in class projects. LEC

Civil, Environmental, and Architectural Engineering

Chair: Tom Mulinazzi
Learned Hall, 1530 West 15th St., Room 2150
Lawrence, KS 66045-7609, www.ceae.egrk.edu, (785) 864-3766
Graduate Adviser: Bruce McEnroe, 2150 Learned Hall, (785) 864-2925

Professors: Darwin, Kurt, Lane, Marotz, McCabe, McEnroe, Mulinazzi, Parr, Randtke, Rolfe, Thomas


Associate Professors: Browning, Glavinich, Han, Matamoros, Medina, Parsons, Rock, Young

Assistant Professors: Bai, Bennett, Chong, McSwain, Peltier, Schrock

Degree Programs and Admission

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 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

The Master of Science degrees in civil engineering, environmental engineering, and architectural engineering and the Master of Civil Engineering degree require ABET-accredited baccalaureate degrees in engineering.

The Master of Civil Engineering degree provides an option for working professionals who do not need the research component of the M.S. degrees. This degree requires two courses in engineering management to complement the technical engineering graduate courses.

The interdisciplinary Master of Science degrees in environmental science and water resources science are intended primarily for students with baccalaureate degrees in fields other than engineering.

The Master of Construction Management is a professional degree intended primarily for part-time graduate students employed in the construction industry. Most students in this program have baccalaureate degrees in fields other than engineering.

The department’s doctoral degrees are the research-oriented Doctor of Philosophy degree, with majors in civil engineering, environmental engineering, and environmental science, and the practice-oriented Doctor of Engineering degree in civil engineering.

Graduate students in the engineering degree programs can specialize in structural engineering, environmental engineering, water resources engineering, geotechnical engineering, transportation engineering, construction, engineering mechanics, building mechanical systems, or energy management. Many of the department’s civil engineering graduate courses are taught in the evening on the KU Edwards Campus in Overland Park for the convenience of part-time graduate students employed in the Kansas City area. Graduate courses in construction management are taught in the evening on the Lawrence campus.

The department admits for all semesters. Students may pursue degrees full or part time. Applicants with baccalaureate degrees in engineering are expected to have undergraduate grade-point averages of 3.0 or higher on a 4.0 scale for regular admission to a master’s program. An undergraduate grade-point average of 3.3 or higher is expected for applicants with baccalaureate degrees in other fields. Applicants with slightly lower grade-point averages may be admitted on probation. 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. Applicants should take the GRE and TOEFL examinations as early as possible, to expedite the admission process.

Submit your application online at www.graduater.ku.edu/GAPC. Send original transcripts of all college and university course work to

The University of Kansas
Graduate Application Processing Center
Strong Hall, 1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

Send all other requested application materials to

The University of Kansas
Graduate Secretary
Dept. of Civil, Environmental, and Architectural Engineering
Learned Hall, 1530 West 15th St., Room 2150
Lawrence, KS 66045-7609

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.

Radar systems engineering emphasizes microwaves (including millimeter waves), signal analysis, remote-sensing/surveillance systems, and electromagnetics.
Master's Degree Requirements

Candidates for the Master of Science degrees have two options. Option A requires 30 credit hours including a thesis of 6 hours (6 to 10 hours for the environmental degrees) and a final oral examination including defense of the thesis. Option B requires 30 hours including a 3- or 4-hour special problem investigation in the specialization and a final examination. It does not require a thesis.

The M.S. degree in civil engineering requires a minimum of 9 hours of graduate-level courses in one of the following areas: (1) construction, (2) engineering mechanics, (3) environmental engineering, (4) geotechnical engineering, (5) structural engineering, (6) transportation engineering, or (7) water resources engineering. 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 M.S. degrees in environmental engineering and environmental science 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 equivalents. Substitutions require the approval of both the student’s committee and the graduate adviser.

The water resources science degree requires a 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.

The Master of Civil Engineering degree requires 34 semester hours of graduate courses, 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 only one of either EMGT 813 or EMGT 823 is accepted. The remaining 27 hours in technical courses are subject to the same criteria as the Master of Science degree in civil engineering, with the additional restriction that no more than 10 hours of engineering management courses may be applied toward the degree. A written 4-hour final examination is required in the student’s concentration. This examination is waived if the student has passed the Professional Engineer examination.

The Master of Construction Management degree requires 33 credit hours, consisting of 18 hours of core courses, 12 hours of electives, and 3 hours of master’s project. Core courses are CMGT 700, CMGT 701, CMGT 702, CMGT 703, CMGT 704, and CMGT 705.

Courses to be applied toward any of the master’s degrees must be listed on a Plan of Study form approved by the student’s major professor and examining committee and the departmental graduate studies committee. No more than 9 hours of courses from other departments nor more than 6 hours of courses numbered below 700 (of which only 3 hours may be within the department) may be applied toward any of the master’s degrees without approval of the departmental graduate studies committee. 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.

Doctoral Degree Requirements

Candidates for the Ph.D. must satisfy all general degree requirements. Requirements for the Doctor of Engineering degree with a major in civil engineering are in accordance with the require-

ments of the School of Engineering. A Plan of Study must be approved by the student’s major professor and examining committee and the departmental graduate studies committee.

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. This requirement is specific to the research skill distinct from, but strongly supportive of, the dissertation research. One research skill is required. Possible research skills include foreign language, computer science, mathematics, statistics, specific laboratory skills, and specific skills in the physical or biological sciences. The foreign language skill can be obtained by taking a two-course sequence in the selected language or demonstrated by passing an examination. The selected research skill must be listed on the Plan of Study form. A separate statement attached to the Plan of Study must list the work to be completed to obtain the research skill.

Architectural Engineering Courses

ARCE 561 Building Mechanical Systems for Architects (3).
ARCE 642 Illumination Engineering (3).
ARCE 645 Power System Engineering (3).
ARCE 660 Building Thermal Science (3).
ARCE 661 HVAC&R Systems Design (3).
ARCE 663 Energy Management (3).
ARCE 664 Fire Protection Engineering (3).
ARCE 665 Solar Energy Systems Design (3).
ARCE 675 Sound and Vibration Control (3).
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). Individual study of special topics and problems. May be repeated for credit. Prerequisite: Student must submit, in writing, a proposal including a statement of the problem the student wishes to pursue and a bibliography of the articles and books required to complete the project. The student must also have a signed agreement with the faculty member proposed as instructor for the course. Consent of instructor. RSH
ARCE 760 Automatic Controls for Building Mechanical Systems (3). An introduction to controls for building mechanical systems. Discussions 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 764 Advanced Thermal Analysis of Buildings (3). Manual and computational methods for determining steady-state and transient thermal loads in buildings. Advanced analysis of energy consumption given choices in building materials and mechanical systems. Prerequisite: ARCE 217 and ARCE 660, or consent of instructor. LEC
ARCE 890 Architectural Engineering Seminar: (1-3). Individual or group studies in building engineers 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. THE

Civil Engineering Courses

CE 552 Water Resources Engineering Design (4).
CE 562 Structural Design I (3).
CE 563 Structural Design II (3).
CE 570 Concepts of Environmental Chemistry (2).

The architectural engineering program is offered in cooperation with the School of Architecture and Urban Planning.

Many civil engineering graduate courses are taught in the evening on the KU Edwards Campus in Overland Park for the convenience of part-time graduate students employed in the Kansas City area.
CE 571 Environmental Chemical Analysis (3).

CE 573 Biological Principles of Environmental Engineering (3).

CE 574 Design of Air Pollution Control Systems (3).

CE 576 Municipal Water Supply and Wastewater Treatment (4).

CE 577 Industrial Water Supply and Waste (3).

CE 580 Transportation Planning and Management (3).

CE 582 Highway Engineering (3).

CE 588 Foundation Engineering (3).

CE 625 Applied Probability and Statistics (3).

CE 684 Materials for Transportation Facilities (3).

CE 704 Dynamics and Vibrations (3). Problems in engineering dynamics and vibrations. Topics include applications of generalized forces and coordinates, Lagrange equations, and study of the performance of single and multiple degree of freedom vibrational systems. (Same as AE 704.) LEC

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 engineering mechanics 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 methods of curve-fitting and vector-projection; 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 projects. CE 625 or equivalent. LEC

CE 730 Intermediate Fluid Mechanics (3). Fall semester. Principles of steady and unsteady flows, theories of potential, viscous, and turbulent flows, and applications in water resources engineering. Prerequisite: CE 330 and MATH 330. LEC

CE 746 Pavement Construction (3). Introduction to the equipment, materials, and construction practices employed in the construction of flexible and rigid highway, airfield pavements, and the relationship of each to pavement design and performance. The principles of statistical based quality control and quality assurance methods and approaches including specific software in the lab. Prerequisite: CE 484 or CE 412, CE 582, and CE 625 or equivalent. LEC

CE 748 Asphalt Technology (3). Introduction to the production of asphalt cements and its use in pavement construction and maintenance applications. Pavement distress identification. Design and use of bituminous pavements 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. Modeling of hydrologic processes: statistical analysis of hydrologic data; applications to the analysis and design of hydrological processes. Prerequisite: CE 485 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 precipitation, solubility, sorption, desorption, chemical weathering, reduction-oxidation processes, 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, 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 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 GEOL 751.) Prerequisite: Differential Equations and Introductory Hydrogeology or Fluid Mechanics, or consent of instructor. LEC

CE 755 Free Surface Flow I (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 330. LEC

CE 756 Watershed Hydrology and Introduction to Management (3). A study of the basic structure and functions of the wetland, 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, Section 404 permitting processes, and mitigation requirements. Prerequisite: Senior or graduate standing in engineering or a science area, or consent of instructor. LEC

CE 757 Pipe-flow Systems (3). Hydraulic design and analysis of pipeline networks, pumping stations, and control systems of transverse rivers. Prerequisite: CE 330 or equivalent. 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 biological components. Prerequisite: CE 754 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 depth the constitutive behavior of concrete and the behavior of reinforced concrete members with respect 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 relations of concrete under uniaxial and biaxial stress states, failure and fracture mechanics 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 477. LEC

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). Design philosophies, stability, composite design, structural behavior, preliminary design, and connections. Prerequisite: CE 561. LEC

CE 766 Advanced Steel Design II (3). Introduction to simple plastic design principles. Analysis and design of steel bridges including composite and noncomposite plate girders, curved girders, box girders, and other specialized bridge types. Fatigue and corrosion, fatigue design strength. Prerequisite: CE 562. LEC

CE 767 Introduction to Fracture Mechanics (3). Theories and modes of structural failure as related to structural design. Application of fracture mechanics to failure analysis, fracture control plans, fatigue crack growth, and stress-corrosion crack growth. Prerequisite: CE 330 or CE 311 and five hours of calculus. 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 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, filtration, 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 study of the microbiology of dilute nutrient solutions: Microbial physiology, microbial ecology, and biochemical pathways will be discussed as they pertain to environmental engineering and science. The role of biogradation processes with emphasis on the integrated planning and control of point and nonpoint sources of pollution. Prerequisite: CE 571 or consent of instructor. LEC

CE 774 Chemical Principles of Environmental Engineering Processes (3). Chemical principles of water treatment, including the design and operation of actual 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, and biological parameters of the ocean and their interaction with pollutants. Special emphasis 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 pollutants 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 developed and used to quantify these processes and gain an appreciation of model limitations. (Same as GEOL 774.) Prerequisite: Introductory course in hydrogeology 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 pollution control. Topics include: water budgets, cooling tower and boiler treatment, corrosion control, government regulations, wastewater characterization, waste 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 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 nonpoint 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 traffic characteristics and behaviors of the road user and his or her vehicle in traffic. The major content includes techniques for obtaining data, analyzing data and interpreting data on traffic frequency, volume, flow, intersection operation, parking and accidents. Capacity analysis using various models, and stress analysis for major transportation facilities such as undivided highways, city streets, freeways, interchanges and intersections are also discussed at length. Prerequisite: CE 582 or equivalent. LEC

CE 785 Terrain Analysis (3). A study of the applications of the science of aerial-photography and computer processing and interpretation of relief present in terrain. Prerequisite: CE 582. 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 582. LEC

CE 792 Knowledge-based/Expert Systems in Engineering (3). Introduction to the use of knowledge-based systems for engineering problem solving. These systems have a separation between the facts and concepts (the knowledge base) and the reasoning process by which conclusions are drawn. A variety of applications are addressed including civil, chemical and 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) is presented. Prerequisites: 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, quantitative and qualitative x-ray microanalysis, techniques of x-ray analysis and specimen preparation techniques. Emphasis is placed on materials, but most techniques apply to biological specimens as well. Prerequisite: PHYSX 212. LEC

CE 800 Theory of Elasticity (3). The basic equations of the theory of elasticity; stress and strain, strain-energy concepts, compatibility equations. Theories of strain. Formulation of problems and exact solutions. Introduction to approximate solution methods based on energy methods and finite elements. LEC

CE 801 Energy Methods (3). The methods of analysis by energy methods of mechanisms and machines. Includes variational energy principles, calculus of variations, stationary energy and complementary energy principles, and the principle 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 their use and emphasis on capillary behavior, 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 or equivalent. LEC

CE 858 Water Quality Management (3). Study of design concepts in creating and restoring wetlands system. 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 758 or equivalent. LEC

CE 857 Sea-level Change: Climate Change (3). A study of the physical and natural processes in the oceanic environment. Specific topics include properties of sediments, 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 755 or consent of instructor. LEC

CE 858 Urban Hydrology and Stormwater Management (3). Hydrology of urban watersheds; floodplain management; hydrologic modeling; storm drainage; stormwater detention; water quality improvement; geomorphology of urban streams; stream corridor management and development. Prerequisite: CE 781. 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 formulation and behavior with emphasis on the isoparametric concept. Computer modeling and practical applications of finite element models to various classes of problems. 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 systems 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 loads 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 environmental contaminants. Emphasis is placed on the interrelationship between the physiological traits or microorganisms, and the physical and chemical properties of the contaminants and the treatment envirnmoment. Case studies and lab work will be included. 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. Discussion of laws and the role of environmental monitoring will be discussed. Prerequisite: CE 573 or CE 773 or equivalent, and five hours of chemistry. LEC

CE 874 Air Pollution Control (3). The design of control devices for the abatement of air pollutants emitted from a variety of 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 characterization and quantities, the properties of hazardous wastes, 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 wastewater. Special emphasis is placed on biological treatment processes. Prerequisite: CE 576 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 consent of instructor. Prerequisite: CE 770 and CE 773 or equivalent. 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 outputs. 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). Study of geometric 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-economic, and environmental factors as well as the application of computer modeling, model 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 Structures (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 886 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 892 Structural Engineering and Mechanics Seminar (1). Presentation and discussion of current research and design in structural engineering and engineering mechanics. LEC

CE 895 Special Topics: (1-3). A course or colloquium to present topics of special interest. Prerequisite: Varies by topic. LEC

CE 899 Thesis: (1-10). An original research or design problem to be presented as a part of the program for the degree of master of science. THE

CE 902 Advanced Vibrations (3). Vibrations of mechanical systems and structures. Nonlinear vibrations. Random vibration. Prerequisite: CE 704 or AE 704. LEC


CE 927 Advanced Mechanics (3). The mechanics of continuous media. A unified treatment of the fundamental principles and theories governing applications in solid and fluid mechanics. Topics covered are stress, strain, and deformation, general physical principles for the continuum, and various constitutive equations. LEC

CE 929 Advanced Topics in Solid Mechanics (2-4). Topics such as thermal stresses, vibrations in elastic continuum, dynamic instability, and other advanced topics. LEC

CE 961 Finite Element Methods for Nonlinear and Dynamic Systems (3). Advanced treatment of finite element techniques for structural analysis including material and geometric non-linearity and the solution of large scale dynamics problems. Prerequisite: CE 861 or ME 761 or equivalent. LEC

CE 983 Implementation of the Urban Transportation Planning System—UTPS (3). A study of the principles and implementation skills of the most up-to-date versions of several urban transportation planning software packages. The course involves a two-hour lecture and a three-hour laboratory period. Prerequisite: CE 885, or UBPL 750, or equivalent. LEC

CE 991 Research: (1-15). An investigation of a special problem directly related to civil engineering. RSH


■ Construction Management Courses

CMGT 500 Construction Engineering (3). CMGT 609 International Construction Management (3). CMGT 700 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, and other topics. Prerequisite: CMGT 500 or consent of instructor. LEC

CMGT 701 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 considerations, and the efficient utilization of resources. Manual and computer techniques are covered. Prerequisite: CMGT 400 or CMGT 700 and MATH 526 or EMGT 802. LEC

CMGT 702 Construction Equipment and Methods (3). This course introduces the student to the multitude of construction equipment employed in construction. The underlying technology and engineering principles are reviewed. Principles of equipment selection, equipment utilization, and equipment economic analysis are covered. Prerequisite: CMGT 400 or CMGT 700, MATH 526 or EMGT 802, or ARCE 357 or EMGT 806. LEC

CMGT 703 Construction Quality, Productivity, and Safety (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 are covered. Prerequisite: CMGT 400 or CMGT 700, MATH 526 or EMGT 802, and ARCE 357 or EMGT 806. LEC

CMGT 704 Construction Estimating and Bidding (3). A study of the quantity survey, cost estimating, scheduling, and project controls; construction operations; and methods of building construction. Prerequisite: CMGT 400 and CMGT 700, MATH 526 or EMGT 802, and ARCE 357 or EMGT 806. LEC

CMGT 705 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. Prerequisite: CMGT 400 or CMGT 700, MATH 526 or EMGT 802, and ARCE 357 or EMGT 806. LEC

CMGT 790 Construction Seminar: (1-3). Prerequisite: Varies with topic. LEC

CMGT 801 Directed Readings in Construction Management (1-3). Graduate-level directed readings on a topic in construction management mutually agreed on by the student and instructor. Intended to build on one or more of the core course topics: project management; planning and scheduling; equipment and methods; quality; productivity and safety; estimating and bidding; contracts; bonds; and insurance. CMGT 802 may be repeated for credit to a maximum of three hours in the degree program. Mutually agreed course deliverable(s) required. Prerequisite: Approval of the course topic and deliverable(s) by the instructor. CMGT 700, CMGT 701, CMGT 702, CMGT 703, CMGT 704, and CMGT 705. IND

CMGT 802 Special Problems in Construction Management (1-3). Graduate-level investigation requiring research of a topic in construction management mutually agreed on by the student and instructor. Intended to build on one or more of the core course topics: project management; planning and scheduling; equipment and methods; quality; productivity and safety; estimating and bidding; contracts; bonds; and insurance. CMGT 802 may be repeated for credit to a maximum of three hours in the degree program. Mutually agreed course deliverable such as a paper summarizing the results of the investigation required. Prerequisite: Approval of the course topic and deliverable by the instructor, CMGT 700, CMGT 701, CMGT 702, CMGT 703, CMGT 704, and CMGT 705. IND

CMGT 805 Construction Accounting and Finance (3). Project-level cost control concepts and structure, time and cost integration, data collection and reporting, equipment cost, job overhead cost, and cost control. Integrating construction project level cost with construction company financial accounting and financial management. Prerequisite: CMGT 702 and CMGT 704 or consent of instructor. LEC

CMGT 890 Construction Seminar: (1-3). Prerequisite: Varies with topic. LEC

CMGT 895 Construction Management Project (1-3). Graduate-level investigation and report on a construction management topic mutually agreed on by the student and project adviser. This is the capstone course in the Master of Construction Management (M.C.M.) degree program. Successful completion of this project requires acceptance of the written report and oral presentation to the student’s graduate committee. Prerequisite: Approval of project topic by project adviser, CMGT 700, CMGT 701, CMGT 702, CMGT 703, CMGT 704, and nine elective credit hours. IND

Electrical Engineering and Computer Science

Chair: Costas Tsatsoulis
Eaton Hall, 1520 West 15th St., Suite 2001G
Lawrence, KS 66045-7621, www.eecs.ku.edu,
(785) 864-4620; fax: (785) 864-3226
Graduate Studies Director: Arvin Agah, 2001F Eaton Hall,
(785) 864-4487

Professors: Alexander, Allen, Andrews, Demarest, Evans, Frost, Gogineni, Grzymala-Busse, Hui, Minden, Miller, Nechiporuk, Schweppe, Smith, Talley, Unz, Wallace

Associate Professors: Ambler, Daugherty, Dean, Moore, Rummer, Schweppe, Smith, Talley, Unz, Wallace

Graduate Research Assistant Professor Emeritus: Doemland
Assistant Professors: Blunt, Chen, Clark, Haverkamp, Huan, Kong, Miller, Niehaus, Perrins, Zheng

Research Assistant Professor: Deavours

In 2005, KU was one of two U.S. public universities to receive a $19-million National Science Foundation grant to fund the Center for Remote Sensing of Ice Sheets. CReSIS studies polar ice and its potential effect on global climate change.
The department offers M.S. degrees in electrical engineering, computer engineering, and computer science; Ph.D. degrees in electrical engineering and computer science; and D.E. degrees in electrical engineering. The department also offers M.S. programs in computer science and information technology at the KU Edwards Campus in the Kansas City area.

The department has focus areas in bioinformatics, communication systems and networking, computer systems design, interactive intelligent systems, and radar systems and remote sensing. Class lists and teaching schedules are available in the graduate office or on the Web site. Other plans of study can be constructed, in conjunction with a faculty 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 any graduate course work, by aptitude test scores on the Graduate Record Examination, and by academic letters of reference.

Unless the applicant's native language is English or the applicant has received a baccalaureate degree or higher from an accredited U.S. institution of higher education, he or she must meet the department's standard for the Test of English as a Foreign Language, which is higher than the general KU requirement. Applicants for graduate teaching assistantships must 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 by January 1. See [www.graduate.ku.edu/GAPC](http://www.graduate.ku.edu/GAPC) for application fees.

Submit your application online at [www.graduate.ku.edu/GAPC](http://www.graduate.ku.edu/GAPC). Send original transcripts of all college and university course work to

**The University of Kansas**

Graduate Application Processing Center

Strong Hall, 1450 Jayhawk Blvd., Room 313

Lawrence, KS 66045-7535

Send all other requested application materials to

**The University of Kansas**

Dept. of Electrical Engineering and Computer Science

Graduate Office, Eaton Hall, 1520 West 15th St., Suite 2001E

Lawrence, KS 66045-7621

**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 conference proceedings or a professional journal. The nonthesis option requires 33 hours of course work and an oral examination in the final 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 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, IT). 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 credit hours of course work approved in a Plan of Study, 3 to 6 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.

The general oral examination must be taken in the last semester. It is conducted by an examining committee consisting of the thesis 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, oral presentation of research, and general knowledge of the discipline meet the department’s standards.

Researchers at KU’s Information and Telecommunication Technology Center specialize in bioinformatics, information technology, telecommunications, radar systems, and remote sensing.

Courses with a _____ at the end of their titles are typically topics or seminar courses that may be repeated for credit. Usually these courses offer different topics each time they are taught. Check with the course instructor about requirements and topics.
Subject to the general restrictions on M.S. course work, the nonthesis option requires a minimum of 33 semester credit hours of course work approved in a Plan of Study and a general oral examination. For students completing the nonthesis option, EECS 899 Master’s Thesis or Report does not count toward the 33 hours required for the degree. Students who choose the nonthesis option must demonstrate their understanding of their discipline to the associate chair for graduate studies during an oral examination scheduled in the last semester.

**Doctoral Degree Requirements**

Requirements for the doctoral degree programs include a written doctoral qualifying examination, course work, a research skills requirement, a comprehensive oral examination, a dissertation, and a final oral examination. Doctoral students also must take at least one semester of EECS 802 EECS Colloquium.

In the first semester, the student must select a major adviser and a committee on studies. This committee guides the student’s selection of courses, participates in the comprehensive and final examinations, and helps the student select a topic for research leading to the dissertation. Should the student’s interests change, the committee membership may be changed accordingly, with the approval of the department’s graduate studies committee. The student’s committee consists of a minimum of five graduate faculty members and is chaired by the major adviser. The adviser and at least two other members of the committee must be members of the department graduate faculty. One committee member must be from outside the KU department.

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 spring semester, and the student must take it at the first opportunity after completing the M.S. or after initial enrollment in the doctoral program. It may be retaken once, in the following spring semester. A more detailed description of the examination, including samples, is available in the graduate office.

Programs leading to the Ph.D. in electrical engineering or computer science require a minimum of 18 semester credit hours of course work beyond the requirements for the M.S. degree and a minimum of 18 credit hours of dissertation research. A minimum of 15 of these 18 hours must be EECS classes numbered 700 and above, excluding EECS 801 Directed Graduate Reading and EECS 891 Graduate Problems.

Students admitted to a doctoral program without an M.S. in the intended field also must meet the 24-hour course work requirement for the M.S. thesis option, for a total of 42 credit hours of course work. In this case, 30 of the 42 hours must be EECS classes numbered 700 and above, excluding EECS 801 Directed Graduate Reading and EECS 891 Graduate Problems.

For the D.E., at least 96 hours of graduate course work, specified by the committee, are required. These include approved master’s course work in the discipline, 30 hours of doctoral project work, and 12 to 18 hours of industrial internship. Deviations from this requirement can be approved by the graduate studies committee. Waiver of required hours on the basis of graduate work done elsewhere may be allowed by petition to the graduate studies committee.

After passing the qualifying examination, each aspirant to the Ph.D. or D.E. degree must complete one of the following research skill requirements before being permitted to take the comprehensive examination. Selection of a particular 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 addition to the one required for the Ph.D. or D.E. degree.
- Demonstration of proficiency in the use of computers to solve real science and engineering problems. The student must write, debug, and document a program to solve a relevant problem.
- Nonstandard skill. Demonstration of any other research skill that is acceptable to the graduate studies committee.

The student must take the doctoral comprehensive examination after passing the qualifying examination, completing the research skills requirement, and completing at least three-fourths of the course work requirement beyond the M.S. The student must complete the comprehensive examination before detailed work on the Ph.D. dissertation or D.E. project begins. Before the examination, the student must submit in writing to the committee a detailed proposal for a possible Ph.D. dissertation or D.E. project. In the comprehensive examination, the student is examined upon the proposal and on knowledge and insight in the specialization, and a dissertation committee is formed.

The examining committee for the comprehensive examination consists of five or more members of the graduate faculty, at least one of whom must be from outside the department and at least three of whom are in the department. It normally includes the student’s committee on studies. If the student passes the comprehensive examination and later chooses another substantially different topic for the dissertation, a new proposal must be presented in writing and orally for the approval of the committee on studies.

Following completion of the Ph.D. dissertation or D.E. project report, the candidate must defend the dissertation or project report in an oral final examination. The examining committee is once again constituted as in the comprehensive oral examination.

**Electrical Engineering and Computer Science Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>EECS 501</td>
<td>Senior Design Laboratory I (3)</td>
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<tr>
<td>EECS 502</td>
<td>Senior Design Laboratory II (3)</td>
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<tr>
<td>EECS 510</td>
<td>Introduction to the Theory of Computing (3)</td>
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<td>EECS 512</td>
<td>Electronic Circuits III (3)</td>
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<td>EECS 541</td>
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<td>EECS 560</td>
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<td>EECS 562</td>
<td>Introduction to Communication Systems (4)</td>
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<tr>
<td>EECS 563</td>
<td>Introduction to Communication Networks (3)</td>
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<td>EECS 580</td>
<td>Electrical Energy Conversion (3)</td>
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<td>EECS 603</td>
<td>Information Processing with C++ (3)</td>
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<td>EECS 611</td>
<td>Electromagnetic Compatibility (3)</td>
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<td>EECS 622</td>
<td>Microwave and Radio Transmission Systems (3)</td>
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<td>EECS 628</td>
<td>Fiber-optic Communication Systems (3)</td>
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<td>EECS 638</td>
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<td>EECS 643</td>
<td>Advanced Computer Organization (3)</td>
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<td>EECS 644</td>
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<td>EECS 645</td>
<td>Computer Architecture (3)</td>
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<td>EECS 647</td>
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<td>EECS 648</td>
<td>Software Engineering Tools (3)</td>
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<td>EECS 649</td>
<td>Introduction to Artificial Intelligence (3)</td>
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<td>EECS 660</td>
<td>Fundamentals of Computer Algorithms (3)</td>
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<td>EECS 662</td>
<td>Programming Languages (3)</td>
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<td>EECS 665</td>
<td>Compiler Construction (3)</td>
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<td>EECS 670</td>
<td>Introduction to Semiconductor Processing (3)</td>
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<td>EECS 672</td>
<td>Introduction to Computer Graphics (3)</td>
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<tr>
<td>EECS 678</td>
<td>Introduction to Operating Systems (3)</td>
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<tr>
<td>EECS 690</td>
<td>Special Topics: ___ (1-3)</td>
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<tr>
<td>EECS 692</td>
<td>Directed Reading (1-3)</td>
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<tr>
<td>EECS 700</td>
<td>Special Topics: ___ (1-5)</td>
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Courses on special topics of current interest in electrical engineering, computer engineering, or computer science, given as the need arises. May be repeated for additional credit. Prerequisite: Variable. LEC
EECS 712 Network Security (3). Introduction to the basic concepts, components, protocols, and software tools to achieve secure communication in a public network. The concept of encryption, integrity, authentication, security models, and the robustness analysis. Emphasis on the application level protocols and vulnerabilities, firewalls, viruses, worm attack, Trojan horses, password security, secure multicast, biometrics, VPNs, internet protocols such as SSL, IPSec, PGP, and SNMP. The policies for access control, user privacy, and trust establishment and abuse in open environments such as eBay. Prerequisite: EECS 570. LEC

EECS 713 High-speed Digital Circuit Design (3). Basic concepts and techniques in the design and analysis of high-frequency digital and analog circuits. Topics include: transmission lines, ground and power planes, layer stacking, substrate materials, and interconnects. Prerequisite: EECS 500 or consent of instructor. LEC

EECS 716 Formal Language Theory (3). Formal language generation by grammars; recognition by automata; standard decision problems for the different classes of automata and grammars. Emphasis on understanding the equivalence of these formulations; elementary containment and closure properties. Emphasis on context-free, deterministic context-free, and regular languages. Prerequisite: EECS 510 or equivalent. LEC

EECS 717 Predicate Logics (3). This course introduces students to computational graph theory and various graph algorithms and their complexities. Algorithms and applications covered will include those related to graph searching, connectivity and distance in graphs, graph isomorphism, spanning trees, shortest paths, matchings, and network flows. In addition, students will be exposed to independent and dominating sets in graph theory, covering, and Traveling Salesman and Postman problems. Prerequisite: EECS 560 or graduate standing with consent of instructor. LEC

EECS 720 Electromagnetics for Communications and Radar (3). Topics in electromagnetic waves, antennas, scattering, electromagnetic properties of materials, and optics. Prerequisite: EECS 420 or equivalent. LEC

EECS 722 Mathematical Logic (3). Propositional calculus. First order theories and model theory. Elementary arithmetic and Gödel's incompleteness theorems. (Same as MATH 722.) Prerequisite: MATH 765 or MATH 791, or equivalent evidence of mathematical maturity. LEC

EECS 723 Microwave Engineering (3-4). Survey of microwave systems, techniques, and hardware. Uncoordinated and coordinated microwave network theory, active and passive microwave components. The four-hour version of the course includes a laboratory. Prerequisite: EECS 420. LEC

EECS 725 Introduction to Radar Systems (3). Basic radar principles and applications. Radar systems are classified into four modes of operation for detection, ranging, and extracting Doppler information. Prerequisite: EECS 360, EECS 420, or EECS 461. EECS 622 recommended. LEC

EECS 730 Introduction to Bioinformatics (3). This course provides an introduction to the fundamental concepts and applications in bioinformatics. The underlying algorithms of existing tools will be discussed. Topics include: molecular biology databases, sequence alignment, gene expression data analysis, protein structure and function, protein analysis, and proteomics. Prerequisite: Data Structures class equivalent to EECS 560, and Introduction to Biology equivalent to BIOL 150, or consent of instructor. 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 covered. Topics include automated theorem proving procedures 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 720 and a knowledge of mathematical logic equivalent to that supplied by EECS 210. Infrequently offered. LEC

EECS 737 Computational Genomics (3). This course focuses on the computational analysis of genomes. Computational methods are studied in tandem with applied studies of genome structure, function, and evolution. Computational genomics topics include chromatin structure and function, genome architecture and evolution, rules of repeats, DNA composition analysis, and processes behind gene expression. Computational genomics includes sequence analysis and modeling, dynamic programming, formal language and linguistic methods, Markov chains and optimization methods, information theory, and molecular modeling. Prerequisite: EECS 730 or consent of instructor. LEC

EECS 738 Machine Learning (3). "Machine learning is the study of computer algorithms that improve automatically through experience." (Tom Mitchell). This course introduces basic concepts and algorithms in machine learning. A variety of topics such as Bayesian decision theory, dimensionality reduction, clustering, neural networks, hidden Markov models, combining multiple learners, reinforcement learning, Bayesian learning etc. will be covered. Prerequisite: Graduate standing in CS or Coe or consent of instructor. LEC

EECS 739 Scientific Parallel Computing (3). This course is concerned with the application of parallel processing to scientific engineering. State-of-the-art computing methodologies are studied along with contemporary applications. The course takes a performance-oriented approach, with attention to parallel algorithms, parallel architecture, compilation issues, and system design. Prerequisite: Graduate standing or consent of instructor and experience with C, C++, or FORTRAN. LEC

EECS 740 Digital Image Processing (3). This course gives a hands-on introduction to the fundamentals of digital image processing. Topics include: image formation, image transformation (shrinking, embossing, image enhancement), image classification, 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, 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 non-linear editing, video feature detection (temporal segmentation, motion estimation), content-based video classification, video compression techniques and standards (MPEG-1, 2, 4, 7), video streaming, and multimedia applications. Digital video tools and techniques will be utilized in several programming projects. Prerequisite: EECS 740 or equivalent. LEC

EECS 744 Digital Signal Processing I (3). Discrete-time representation of signals and systems, z-transform, signals, and systems correlation, sampling theory, analysis of linear time-invariant systems, filter implementation, digital filter design, discrete Fourier transform. Prerequisite: ECE 420 or equivalent. LEC

EECS 745 Implementation of Networks (3). EECS 745 is a laboratory-focused implementation of networks. Topics include direct link networks (encoding, framing, error detection, reliable transmission, SONET, FDDI, network adapters, Ethernet, 802.11 wireless networks); packet and cell switching (ATM, switching hardware, broadcast and multicast, switched LANs). Topics ( Iterate near optimal, IP, DNS, RARP, TCP, UDP, Multicast, IP tunnels, DNS); end-to-end protocols (UDP, TCP, APIs and sockets, RCPS, performance); end-to-end data (presentation formatting, data compression, security); congestion control (queueing disciplines, TCP control and congestion avoidance); high-speed networking (issues, services, experiences); voice over IP (peer-to-peer calling, call managers, call signalling, PBX and call attendant functionality). Prerequisite: EECS 563 or EECS 780. LEC

EECS 746 Database Systems (3). Introduction to the design of databases and their operations. Basic database concepts, architectures, and data storage structures and indexing. Though other architectures are discussed, focus is on relational databases and the SQL retrieval language. Normalization, functional dependencies, and multi-valued dependencies are covered. Closures are defined in the context of the implementation of a simple database with a web interface. Prerequisite: EECS 448 or consent of instructor. Students cannot receive credit for both EECS 647 and EECS 746. LEC

EECS 747 Mobile Robotics (3). Design, construction, and programming of mobile robots. Topics include computational hardware, designing and prototyping, sensors, mechanics, motors, power, robot programming, robot design principles, and general concepts of intelligent problem solving. Prerequisite: At least one class in Artificial Intelligence. 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 processes, resource allocation and management strategies, resource sharing and queuing, concurrency control, and system protection and security. Other topics such as design methodologies, fault tolerance, languages, programming languages, and programming paradigms may 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 system development and modeling for computer systems. Course focuses on the concept of requirements, and how to use it to interact with the system developers and the future end-users. Prerequisite: EECS 594. LEC

EECS 761 Programming Paradigms (3). An investigation of alternative programming paradigms and their representative effect on programming expressiveness and style. Emphasis is placed on a comparative study of discrete mathematics, object-oriented, functional, and parallel programming paradigms, plus additional paradigms as relevant. Prerequisite: EECS 662 or EECS 807 and consent of instructor. LEC

EECS 762 Programming Language Foundation (3). Relationship between syntactic, static-semantic, and semantic structures. Attribute grammars as models for static-semantic information processing. Survey of formal semantic models, including operational, denotational, and axiomatic semantics. Related state-based, semantic, and programming language issues. Prerequisite: EECS 662 or EECS 807 or equivalent. LEC
A KU doctoral student in electrical engineering was one of only 52 students across the nation to receive a NASA fellowship to help develop a radar to measure ice thickness and determine bedrock conditions below the ice sheets in Greenland and Antarctica.

Computer science degree programs allow a variety of plans, both theoretical and applied.
ECE 801 System Theory (3). Review of analysis of linear systems. Spectral analysis. Control systems. Optimization and estimation theory. Prerequisite: ECE 371 and MATH 463 LEC.

ECE 803 Systems Engineering (3). I. Introduction to systems engineering. Engineering design and systems integration. Systems modeling and simulation. Project management. Health, safety, and environment. Ethical and social issues. Project planning, risk analysis, quality planning. II. The systems approach to software engineering. Project management and control. VLSI CAD. Prerequisite: ECE 320 LEC.

ECE 805 Introduction to Digital Signal Processing (3). The course provides an introduction to signal processing. Topics include: sampling rate conversion, filter design, the discrete fourier transform, and selected applications. Prerequisite: MATH 320 or ECE 371 LEC.

ECE 806 Advanced Digital Signal Processing (3). This course will cover advanced topics in digital signal processing, including: wavelet transforms, filter banks, multirate signal processing, and applications in communications, image processing, and bioengineering. Prerequisite: ECE 805 or equivalent LEC.

ECE 825 Radar Systems (3). Description and analysis of radars of various types. Introduction to radar systems and key aspects of radar system analysis. Topics will include: basic radar system configuration, radar system design, and signal processing. Prerequisite: ECE 413 LEC.

ECE 826 InSAR and Applications (3). Description and analysis of processing data from synthetic-aperture radars and interferometric synthetic-aperture radars. Topics covered include SAR basics and signal properties, range and azimuth compression, signal processing algorithms, interferometry and coregistration. Prerequisite: ECE 725 and ECE 744 LEC.

ECE 828 Advanced Fiber-optic Communications (3). An advanced course in fiber-optic communications. The course will focus on 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 solution systems, light-wave analog video transmission, SONET & ATM optical networking, and advanced multi-access lightwave networks. Prerequisite: ECE 628 or equivalent LEC.

ECE 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: Graduate standing in the ECE department or Cognitive Science department or permission of the instructor LEC.


ECE 835 Protein Bioinformatics (3). This course emphasizes the applications of computational algorithms to main problems in protein bioinformatics and molecular biology. A variety of topics, including protein sequence alignments, profiles and protein structure classification and prediction, will be either introduced briefly or discussed in detail. Students will be asked to present some selected research papers. Prerequisite: ECE 730 LEC.

ECE 837 Data Mining (3). Extracting data from data bases to data warehouses. Preprocessing of data: handling incomplete, uncertain and vague data sets. Discretization methods. Methodology of learning from examples: rules of generalization, control strategies. Typical learning systems: ID3, AQ, C-4.5, and LEAR. Validation of knowledge. Visualization of knowledge bases. Data mining under uncertainty, using approaches based on probability theory, fuzzy set theory, and rough set theory. Prerequisite: Graduate standing in CS or ME or consent of instructor LEC.

ECE 838 Applications of Machine Learning in Bioinformatics (3). This course is introduction to the application of machine learning methods in bioinformatics. Major subjects include: biological sequence analysis, microarray interpretation, protein interaction analysis, and biological network analysis. Common biological and biomedical data: data collection, analysis, and visualization. SVM, neural networks, and hidden Markov models. Prerequisite: ECE 710 or permission of the instructor LEC.

ECE 839 Mining Special Data (3). Problems associated with mining incomplete and numerical data. The MLEM2 algorithm for rule induction directly from incomplete and numerical data. Application of Apriori algorithm. KNN and other statistical methods. Mining financial data sets. Problems associated with imbalanced data sets and temporal data. Mining medical and biological data sets. Induction of rule generation. Evaluation of data mining: sensitivity, specificity, accuracy. Prerequisite: Graduate standing in CS or ME or consent of instructor LEC.

ECE 841 Computer Vision (3). The objective of this course is to give students a hands-on introduction to the fundamentals of computer vision. Topics include: Image Formation, Image Segmentation, Binary Image Analysis, Edge Detection, Line Drawing Interpolation, Shape from Shading, Motion Analysis, Stereo, Shape Representation, and Object Recognition. The objective of this course is to give students a hands-on introduction to the fundamentals of computer vision. Prerequisite: ECE 740 or equivalent LEC.

ECE 842 Digital Video for Multimedia Systems (3). An introduction to digital video for multimedia systems. Topics include: basics of digital video, capture and non-linear editing, video feature detection (temporal segmentation, motion estimation), content based video classification, video compression techniques and standards (MPEG), video streaming, and multimedia applications. Prerequisites: ECE 740 or equivalent, and consent of instructor LEC.

ECE 844 Digital Signal Processing II (3). Adaptive filtering, mathematics for advanced signal processing, cost function optimization, signal processing algorithms for optimum filtering and linear prediction, power spectrum estimation, steepest descent, adaptive algorithms, and ECE 744 LEC.


ECE 852 Software Engineering II (3). This course is a continuation of the material presented in ECE 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: ECE 448 or equivalent. Not open to students who have taken ECE 810 LEC.

ECE 849 Multisensor Systems (3). In depth look at the area of multisensor systems (MAS). An intelligent agent is an autonomous software program that exists on a computer or a robot. It interacts with the environment and can be used for a variety of tasks, such as navigation, object recognition, pattern recognition, function approximation, and system optimization. Introduction to fuzzy set theory and fuzzy systems. Evolution of artificial neural networks and training algorithms. Pattern classification for biological systems. Prerequisite: Graduate standing in the ECE department or permission of the instructor LEC.

ECE 861 Random Signal Theory (3). An extension of probabilistic modeling introducing random processes and spectral representation. Special emphasis on filtering and estimation including Weiner, Kalman, matched, pre- and de-emphasis filters. Prerequisite: ECE 461 LEC.

ECE 862 Principles of Digital Communication Systems (3). A study of communication systems using noisy channels. Principal topics are: information and channel capacity, baseband data transmission, digital carrier modulation, error control coding, and digital transmission of analog signals. The course includes a laboratory/computer aided design component integrated into the study of digital communication systems. Prerequisites: ECE 562. Corequisite: ECE 861. LEC.

ECE 863 Analysis of Communication Networks (3). Modeling and analysis for performance and design of communication networks. Topics include: queueing theory, routing algorithms, analysis of TDM systems, modeling and analysis of networks of queues, and protocols. Analysis of congestion and flow control algorithms, analysis of routing algorithms; analysis of bus and ring networks. Prerequisites: ECE 861 LEC.

ECE 864 Multivariabel Network Analysis and Control (3). This course is introduction to the field of multivariate network analysis and control. Topics include: multivariable control systems, state space models, and multivariable control. Prerequisites: ECE 700 or permission of the instructor LEC.

ECE 865 Wireless Communication Systems (3). The theory and practice of the engineering of wireless telecommunication systems. Topics include cellular principles, mobile radio propagation (including indoor and outdoor channels), radio link calculations, fading (including Rayleigh, Ricean, and other models), packet radio, equalization, diversity, error correction coding, spread spectrum, multiple access techniques (including time, frequency, and code), and wireless networking. Current topics of interest will be covered. Corequisites: ECE 861 LEC.

ECE 867 Statistical Natural Language Processing (3). Statistical approaches to processing natural language text have become dominant in recent years. This course is introduction to statistical natural language processing (NLP). The course covers the theory and algorithms needed for building NLP tools. It provides broad but rigorous coverage of mathematical and linguistic foundations, as well as detailed discussion of statistical methods, allowing students to construct their own statistical language models. Topics include: English text classification, information retrieval, and other applications. Prerequisites: Fluency in programming and knowledge of basic statistics and probability. LEC.

ECE 869 Error Control Coding (3). A study of communication channels and the coding problem. An introduction to finite fields and linear block codes such as cyclic, Hamming, Golay, BCH, and Reed-Solomon. Convolutional codes and the Viterbi algorithm are also covered. Other topics include trellis coded modulation, iterative (turbo) codes, LDPC codes. Prerequisite: ECE 862 LEC.

ECE 881 High-performance Networking (3). Comprehensive coverage of the discipline of high-bandwidth low-latency networks and communication, including high-bandwidth-x-product devices, with an emphasis on principles, architecture, protocols, and system design. Topics include high-performance network architecture, control, and signaling; high-speed wired, optical, and wireless links; fast packet, IP, and optical switching; IP lookup, classification, and scheduling; network processors, end system design and protocol optimization, network interfaces; storage network design and protocols; and optical networking and low-latency applications. Principles will be illustrated with many leading-edge and emerging protocols and architectures. Prerequisite: ECE 563 or ECE 780 LEC.
ECECS 882 Mobile Wireless Networking (3). Comprehensive coverage of the disciplines of mobile and wireless networking, with an emphasis on architecture and protocols. Topics include cellular telephony, MAC algorithms, wireless PANS, LANs, MANs, and WANs; wireless and mobile Internet; mobile ad hoc networking; mobility management, sensor networks; satellite networks; and ubiquitous computing. Prerequisite: ECECS 863 or ECECS 780. LEC

ECECS 888 Internet Routing Architectures (3). A detailed study of routing in IP networks. Topics include evolution of the Internet architecture, IP services and network characteristics, an overview of routing protocols, the details of common interior routing protocols and interdomain routing protocols, and the relationship between routing protocols and the implementation of policy. Issues will be illustrated through laboratories based on common routing platforms. Prerequisite: ECECS 745. LEC

ECECS 891 Graduate Problems (1-5). Directed studies of advanced phases of electrical engineering, computer engineering, or computer science not covered in regular graduate courses, including advanced laboratory work, special research, or library reading. Prerequisite: Consent of instructor. RSH

ECECS 899 Master's Thesis or Report (1-6). THE

ECECS 900 Seminar (0.50-3). Group discussions of selected topics and reports on the progress of original investigations. Prerequisite: Consent of instructor. LEC

ECECS 920 Advanced Electromagnetics (3). A theorem based treatment of electromagnetic theory, with applications. Topics include source modeling, equivalence concepts, Green’s functions, construction of solutions, and integral equations. Applications include scattering and electromagnetic numerical techniques. Prerequisite: ECECS 720 or equivalent. LEC

ECECS 929 Electromagnetic Propagation and Scattering in Random Media (3). Polarimetric plane-wave propagation, including the complex propagation matrix and Stokes vector representation. Electromagnetic scattering, including the scattering matrix, Mueller matrix, scattering cross-section, extinction cross-section, Mie scattering, and Rayleigh scattering. Volume scattering in random media, including the Born approximation, Rayleigh scattering statistics, multipole scattering mechanisms, Radiative transfer theory, and volume scattering above a dielectric half-space. Propagation through random media, including the extinction coefficient, the optical theorem, and the distorted Born approximation. Scattering from rough surfaces, including the Kirchoff, Physical Optics and small-perturbation models. Prerequisite: ECECS 720. LEC

ECECS 962 Advanced Modulation and Coding (3). Study of coding subsystems and techniques within a digital communication system. Analysis of the effects of combined modulation and coding. Commercial and military applications of spread spectrum multipath. Prerequisite: ECECS 862. LEC

ECECS 963 Integrated Telecommunication Networks (3). Design and description of telecommunication networks designed to integrate different types of traffic and provide different user services. Integrated Services Digital Network (ISDN), Broadband ISDN and Asynchronous Transfer Mode (ATM). Fast packet - transport of speech, image, video. Source modeling; performance analysis, and congestion control techniques for integrated networks. Prerequisite: Either ECECS 863 or ECECS 663. LEC

ECECS 964 Simulation of Communication Systems (3). This course will cover both fundamental and advanced concepts of simulation based analysis and design of communication systems. Monte Carlo simulation principles, modeling techniques, and performance estimation procedures will be covered. Case studies in simulating satellite, optical, and digital microwave links will be presented and the students will be exposed to the art of the simulation packages. Prerequisite: ECECS 861 and ECECS 862. Infrequently offered. LEC

ECECS 965 Detection and Estimation Theory (3). Detection of signals in the presence of noise and estimation of signal parameters. Narrowband signals, multiple observations, signal detection and separation. Theoretical structure and performance of the receiver. Prerequisite: ECECS 861. LEC

ECECS 967 Mathematical Optimization with Communications Applications (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 ECECS 861. Infrequently offered. LEC


ECECS 983 Resilient and Survivable Networking (3). Graduate research seminar that provides overview of the field of resilient, survivable, disruption-tolerant, and challenged networks. These networks aim to remain operational and provide an acceptable level of service in the face of a number of challenges including: natural faults of network components; failures due to misconfiguration or operational errors; attacks against the network hardware, software, or protocol infrastructure; large-scale natural disasters; unpredictably long delay paths due to natural satellite and interplanetary) or as a result of episodic connectivity; weak and episodic connectivity; high mobility of channels and subnetworks; unusual traffic load (e.g. flash crowds). Multi-level solutions that span all protocol layers, planes, and parts of the network will be systematically and systematically covered. Prerequisite: ECECS 862; previous experience in simulation desirable. LEC

ECECS 998 Post-master's Research (1-6). RSH

ECECS 999 Doctoral Dissertation (1-12). THE

Engineering Management

Director: Herbert R. Tuttle
The University of Kansas Edwards Campus
12600 Quivira Rd., Overland Park, KS 66213-2402
http://emgt.ku.edu, (913) 897-8560; fax: (913) 897-8682
Professors: Kraft, Zerwekh
Professor Emeritus: Holtzman
Assistant Professors: 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 with a strong science and technology background. The EMGT program emphasizes the ability to conduct and integrate management science with technical expertise to solve complex problems, analyze strategic business issues, and develop technology-based organizations that are more competitive. The EMGT program offers these emphasis areas:

- **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/production engineering
- Systems and information technology

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 science and engineering foundation (6 to 8 hours of calculus, 3 hours of differential equations, 6 hours of physics, and 3 hours of chemistry) as well as courses or demonstrated ability in statistics, probability, and linear algebra. The Graduate Record Examination is not required. Students from other KU programs taking EMGT classes should discuss prerequisites with the EMGT instructor or director before enrollment.

Applicants must fulfill general general requirements (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 have at least two years of full-time, post-baccalaureate experience in a technological environment.

A completed application includes the application fee, application form, résumé, one original transcript, and three recommendation forms. International students also must meet English, visa, and financial requirements. Application packets, course schedules, faculty biographical information, and other program information may be requested from the EMGT office or downloaded from our home page.

Submit your application online at www.grade.ku.edu/GAPC. Send original transcripts of all college and university course work to

The University of Kansas
Graduate Application Processing Center
Strong Hall, 1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

Send all other requested application materials to
The University of Kansas Edwards Campus
Engineering Management
12600 Quivira Rd.
Overland Park, KS 66213-2402
EMGT 800 Principles of Engineering Management (3)  
This course introduces students to the basic concepts of management theory and practice for the engineering manager and general behavior of technical organizations. This course presents a history of the schools of management thought through the modern research that began the participative management movement. Emphasis is placed on the development of motivational theories and management style principles. The student will perform research to determine how their employer or clients apply these theories.

EMGT 801 Management Theory and Practice for Engineering Managers (3)  
This course is designed to introduce the student to the basic concepts of management theory and practice for the engineering manager and organizational behavior. Emphasis is placed on the development of motivational theories and management style principles. The student will perform research to determine how their employer or clients apply these theories.

EMGT 802 Statistical Analysis and Prediction of Engineering Systems (3)  
A limited number of credit hours may be applied to the management major or other major programs. This course covers: linear programming, queuing models, integer and non-linear programming, and introduction to decision analysis. Prerequisite: Either EMGT 800 or permission of instructor.

EMGT 803 Forecasting and Assessment (3)  
This course focuses on the use of statistical and non-statistical techniques to support decision making. The emphasis is on understanding and interpreting the results of forecasting models and the ability to identify the appropriate type of model for a given situation. This course provides an overview of the key concepts and techniques used in forecasting and business decision making. It covers the basics of forecasting, including trend analysis, exponential smoothing, and regression analysis. The course also covers advanced topics such as time series analysis, moving averages, and box-plot analysis.

EMGT 804 Business Development and Marketing of Professional Services (3)  
This course covers the principles and theories of business development and marketing as applicable to professional engineering and architectural practices. The course will cover various aspects of business development, including project proposal preparation, client relationship management, and marketing strategies.

EMGT 805 Management of Innovation (3)  
This course covers the principles and theories of business development and marketing as applicable to professional engineering and architectural practices. The course will cover various aspects of business development, including project proposal preparation, client relationship management, and marketing strategies.

EMGT 806 Finance for Engineers (3)  
A limited number of credit hours may be applied to the management major or other major programs. This course covers financial management principles and their application to engineering projects. The course will cover topics such as financial statements, cash flow management, financial analysis, and risk management.

EMGT 807 Labor and Employee Relations for the Engineering Manager (3)  
This course covers the principles and theories of business development and marketing as applicable to professional engineering and architectural practices. The course will cover various aspects of business development, including project proposal preparation, client relationship management, and marketing strategies.

EMGT 808 Quality Management (3)  
This course covers the principles and theories of business development and marketing as applicable to professional engineering and architectural practices. The course will cover various aspects of business development, including project proposal preparation, client relationship management, and marketing strategies.

EMGT 809 Personal Development for the Engineering Manager (4)  
This course covers the principles and theories of business development and marketing as applicable to professional engineering and architectural practices. The course will cover various aspects of business development, including project proposal preparation, client relationship management, and marketing strategies.

EMGT 810 Applications of Quantitative Analysis in Decision Making (3)  
This course covers the principles and theories of business development and marketing as applicable to professional engineering and architectural practices. The course will cover various aspects of business development, including project proposal preparation, client relationship management, and marketing strategies.

EMGT 811 Engineering Systems Simulation (3)  
This course covers the principles and theories of business development and marketing as applicable to professional engineering and architectural practices. The course will cover various aspects of business development, including project proposal preparation, client relationship management, and marketing strategies.

EMGT 812 Law and the Design Professional (3)  
This course covers the principles and theories of business development and marketing as applicable to professional engineering and architectural practices. The course will cover various aspects of business development, including project proposal preparation, client relationship management, and marketing strategies.

EMGT 813 Design Project Management in Professional Practice (3)  
This course covers the principles and theories of business development and marketing as applicable to professional engineering and architectural practices. The course will cover various aspects of business development, including project proposal preparation, client relationship management, and marketing strategies.

EMGT 814 Financial and Managerial Accounting for the Engineer (3)  
This course covers the principles and theories of business development and marketing as applicable to professional engineering and architectural practices. The course will cover various aspects of business development, including project proposal preparation, client relationship management, and marketing strategies.

EMGT 815 Managerial Economics (3)  
This course covers the principles and theories of business development and marketing as applicable to professional engineering and architectural practices. The course will cover various aspects of business development, including project proposal preparation, client relationship management, and marketing strategies.

EMGT 816 Project Management (3)  
This course covers the principles and theories of business development and marketing as applicable to professional engineering and architectural practices. The course will cover various aspects of business development, including project proposal preparation, client relationship management, and marketing strategies.

EMGT 817 Budgeting and Cost Control (3)  
This course covers the principles and theories of business development and marketing as applicable to professional engineering and architectural practices. The course will cover various aspects of business development, including project proposal preparation, client relationship management, and marketing strategies.

EMGT 818 Accounting and Financial Reporting (3)  
This course covers the principles and theories of business development and marketing as applicable to professional engineering and architectural practices. The course will cover various aspects of business development, including project proposal preparation, client relationship management, and marketing strategies.

EMGT 819 Engineering Ethics (3)  
This course covers the principles and theories of business development and marketing as applicable to professional engineering and architectural practices. The course will cover various aspects of business development, including project proposal preparation, client relationship management, and marketing strategies.

EMGT 820 Quality Management (3)  
This course covers the principles and theories of business development and marketing as applicable to professional engineering and architectural practices. The course will cover various aspects of business development, including project proposal preparation, client relationship management, and marketing strategies.

EMGT 821 Strategic Analysis of Technology Projects (3)  
This course covers the principles and theories of business development and marketing as applicable to professional engineering and architectural practices. The course will cover various aspects of business development, including project proposal preparation, client relationship management, and marketing strategies.

EMGT 822 Cost Analysis and Management (3)  
This course covers the principles and theories of business development and marketing as applicable to professional engineering and architectural practices. The course will cover various aspects of business development, including project proposal preparation, client relationship management, and marketing strategies.

EMGT 823 Management of Internal Engineering Projects (3)  
This course covers the principles and theories of business development and marketing as applicable to professional engineering and architectural practices. The course will cover various aspects of business development, including project proposal preparation, client relationship management, and marketing strategies.
EMGT 824 Product Marketing for Engineering Managers (3). Basic principles of market- ing as a major enabling function in the manufacturing 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 mar- keting plan for an agreed-upon product. Prerequisite: Admission to a graduate pro- gram in engineering or Pittsburgh State’s technology management program. LEC

EMGT 830 Case Studies in Engineering Management (2). A capstone course for the program which provides an integration of the material presented in the other courses through the utilization of several engineering management case studies. Prerequisite: Completion of a minimum of 21 credit hours in the Engineering Management program. LEC

EMGT 835 Field Project (M.S.) (1-3). A problem in engineering management, the satisfactory completion of which satisfies the project requirement for the degree of Master of Science in Engineering Management. THE

EMGT 840 Systems Approach to Engineering (3). This is a first course at the gradu- ate level introducing the formal methods and processes in bringing complex sys- tems into being and improving existing systems. Systems include both products and services. Emphasis is placed on: the definition of customer needs, the entire life cycle of systems, and introduction to formal specification methods, the value to cost ratio and the management of the systems engineering process. LEC

EMGT 844 Managing Software Development Projects (3). This course investigates the area of managing software development and presents the management process as a means of optimizing business considerations and project demands. Uncertainties in product/service specifications, technology risks, cost and deliver- erty requirements impact the management functions. Cost and schedule estimation techniques are presented together with project planning, risk control and meas- urement technologies. The techniques presented in this course are directly appli- cable to management in other industry segments. Guest speakers are used to demonstrate applications in this course. LEC

EMGT 848 Information Technology for Management (3). This course is intended to bring the student up to date on developments in the field of information technol- ogy (IT) and to prepare the student to apply those technologies in the workplace. To this end, the course is divided into two components. First, current hardware, software, and networking technologies will be presented. Topics include relational databases, object oriented design and programming, client-server technologies, the Internet, and emerging communication technologies. Second, approaches to evalu- ating 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 secu- rity, and project management. LEC

EMGT 850 Environmental Issues for Engineering Managers (3). This course provides a survey of the environmental regulations, environmental problems, and environmental solutions that must be dealt with by engineering managers regardless of their function or industry. A historical perspective on the environment is presented, followed by dis- cussion of pollution generation (sources), transportation, fate, and effects. The quantity and quality of various types of pollutants emitted to various media and the risk posed by these pollutants is analyzed. The regulatory process is examined from the perspec- tive of the legislator, the regulator, the regulated, the engineer, and the public. LEC

EMGT 854 Management of Business Intelligence and Security for Strategic Planning (3). Management of competitive intelligence and security in business 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, com- petition, customers, etc. It also addresses strategy and operations. Further, these tools are applied to determining what will likely happen in the future and how to use those forecasts to optimize strategic and operational plans. LEC

EMGT 860 Special Problems in Engineering Management (1-4). Graduate-level inves- tigation of a specialized area of independent research on problems or subjects of immedi- ate interest to a student or faculty member. Intended to develop a student’s capability in coordinating two or more of the following: technology, finance, economics, applied mathematics, and managerial communication. EMGT 860 may be repeated for credit to a maximum of four credits. Prereq: Approval of an outline of the proposed project by the instructor and the program director. RSH

EMGT 862 Manufacturing Systems Integration (3). This course develops the ra- tionale and need for the integration of manufacturing systems, and deals with the multitude of practical problems involved with manufacturing systems integration. Topics covered include intelligent manufacturing subsystems and vendor-specific islands of automation, on-line and off-line information sources, and end users of information in the manufacturing enterprise. Engineering details covered include the types of communication links available between systems, communication standards, network and protocol alternatives, and hardware platform alternatives. Management concepts covered include the top-down design/bottom-up imple- mentation approach to system integration, long-range planning and management of integration projects, reliability and security issues, and human factors. LEC

EMGT 867 Advanced Operations Management (3). This course provides the stu- dent with up-to-date information of the management of manufacturing opera- tions. Emphasis is on quantitative methods for designing and analyzing manufac- turing processes, simulation of manufacturing processes, and recent paradigms in manufacturing including just-in-time production, synchronous manufacturing, and agile manufacturing. A semester project is required covering some aspect of operations management in detail. LEC

Engineering Courses

ENGR 504 Technical Writing for Engineers (1-3).

ENGR 515 Verbal Communications in Engineering (1).

ENGR 800 Bioengineering Colloquium (0.50). Five to six seminar sessions each se- mester focused on introducing graduate students to the breadth of bioengineer- ing. Collaboration will focus on bringing in cutting-edge researchers from other in- stitutions, engineering faculty from KU, and senior Ph.D. students in bioengineer- ing to present their research work. Prerequisite: Permission of instructor. LEC

ENGR 801 Issues in Scientific Integrity (1). Lectures and discussion on ethical is- sues in the conduct of a scientific career, with emphasis on practical topics of spe- cial importance in bioengineering. Topics include the nature of ethics, the roles of the scientist as a reviewer, entrepreneur, employer and teacher, research ethics in the laboratory, social responsibility and research ethics regulation. Prerequisite: Permission of instructor. LEC

ENGR 830 Internship (1-12). One credit per month of approved engineering internship satisfying one of the requirements for the Master of Engineering degree program. FLD

ENGR 835 Project (M.E.) (3-6). A design problem or system study satisfying the project requirement for the Master of Engineering degree. THE

ENGR 940 Project (D.E.) (1-16). A major design problem or system study satisfying the project requirement for the Doctor of Engineering degree. THE

Engineering Physics
Chair: Stephen J. Sanders
Malott Hall, 1251 Wescoe Hall Dr., Room 1082
Lawrence, KS 66045-7582, www.physics.ku.edu, (785) 864-4626
No graduate program in engineering physics is offered. The courses listed below are applicable toward degrees in related areas.

Engineering Physics Courses

EPHX 501 Honors Research (1-4).

EPHX 503 Undergraduate Research (1-4).

EPHX 516 Physical Measurements (4).

EPHX 518 Mathematical Physics (3).

EPHX 521 Mechanics I (3).

EPHX 531 Electricity and Magnetism (3).

EPHX 536 Electronic Circuit Measurement and Design (4).

EPHX 600 Special Topics in Physics and Astrophysics (1-3).


EPHX 611 Introductory Quantum Mechanics (3).

EPHX 615 Numerical and Computational Methods in Physics (3).

EPHX 621 Mechanics II (3).

EPHX 623 Physics of Fluids (3).

EPHX 631 Electromagnetic Theory (3).

EPHX 641 Introduction to Nuclear Physics (3).

EPHX 650 Optics (3).

EPHX 661 Introduction to Elementary Particle Physics (3).

EPHX 671 Thermal Physics (3).

EPHX 681 Concepts in Solids (3).

EPHX 691 Astrophysics I (3).

EPHX 693 Gravitation and Cosmology (3).

Career opportunities for engineers include a wide range of positions with business, industry, and government.

KU is recognized as a leader in the use of radar for geologic mapping.
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, control systems, and biomechanics and biomaterials.
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 90 credit hours of post-baccalaureate work. The minimum course work requirement is 54 credit hours, which must include

- Engineering design ................................................................. 9 credit hours
- Engineering management ...................................................... 9 credit hours
- Mathematics ................................................................. 9 credit hours

The remaining 27 credit hours of course work are selected to meet the student’s interests and goals, subject to the approval of the advisory committee. Course work required for a master’s degree may be included in this 54-hour total if approved by the advisory committee. A minimum of 21 credit hours of mechanical engineering courses numbered 700-990 (excluding ME 702, ME 899, and ME 901) must be included. In addition, the following research components are required for the degree:

- Internship ................................................................. 12 credit hours
- Project ................................................................. 24 credit hours

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 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 661 The Finite Element Method for Stress Analysis (3).
- ME 662 Control Systems ....................................................... (2-3).
- ME 696 Design for Manufacturability (3).
- ME 702 Mechanical Engineering Analysis (3).
- ME 708 Microcomputer Applications in Mechanical Engineering (2-3).
- ME 711 Bearings and Bearing Lubrication (3).
- ME 720 Advanced Dynamics of Machinery (3).
- ME 733 Gas Dynamics (3).
- ME 750 Biomechanics of Human Motion (3).
- ME 751 Experimental Methods in Biomechanics (3).
- ME 753 Bone Biomechanics (3).
- ME 756 Biofluid Dynamics (3).
- ME 763 Introduction to Composite Materials (3).

ME 682 Control Systems (2-3).
ME 696 Design for Manufacturability (3).
ME 702 Mechanical Engineering Analysis (3).
ME 708 Microcomputer Applications in Mechanical Engineering (2-3).
ME 711 Bearings and Bearing Lubrication (3).
ME 720 Advanced Dynamics of Machinery (3).
ME 733 Gas Dynamics (3).
ME 750 Biomechanics of Human Motion (3).
ME 751 Experimental Methods in Biomechanics (3).
ME 753 Bone Biomechanics (3).
ME 756 Biofluid Dynamics (3).
ME 763 Introduction to Composite Materials (3).
ME 774 Radiative Heat Transfer (3). The formulation of steady and unsteady radiant 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. Engineering experience in planning, execution and reporting on selected practical engineering situations. Prerequisite: ME 628 or equivalent. LEC

ME 808 Advanced Microprocessor Applications (3). Advanced design and development of microprocessor based mechanical systems. Individual and team projects involving the development and integration of hardware and software into a “smart” system which includes the sensing, processing, and controlling functions are accomplished. Emphasis is on the use of the latest sensors and development tools. Prerequisite: Permission of instructor. LEC

ME 810 Advanced Fluid Mechanics (3). Topics include kinematic and dynamic behavior of fluids, derivation of Navier-Stokes equations, flow classification, solutions of viscous and inviscid flows for simple geometries, potential flow theory and laminar and turbulent boundary layer theory. Prerequisite: ME 510 or equivalent. LEC

ME 831 Convective Heat and Momentum Transfer (3). The formulation and solution of steady and unsteady convective heat, mass, and momentum transfer problems. Topics include boundary layers, duct flows, natural convection with and without phase change, development of analogies, transport properties, numerical methods. Prerequisite: ME 612 or equivalent. LEC

ME 832 Computational Fluid Dynamics and Heat Transfer (3). The fundamentals of the finite element method are presented and applied to the formulation of numerical models for heat and momentum transfer. The accuracy, stability, and computational efficiency of different algorithms are analyzed. Computer programs are developed for classical benchmark problems. Prerequisite: ME 508, ME 510, and ME 612 or equivalents. LEC

ME 840 Continuum Mechanics (3). Principles of Continuum Mechanics for solids, fluids, and gases. Frames of references, measures of motion, deformation, strains, stresses, their rates, objectivity and invariance. Conservation laws, constitutive equations, equations of state and thermodynamic principles for developing mathematical models of continuum matter. Theoretical solutions of model problems. Corequisite: MATH 647 or ME 702; or permission of instructor. LEC

ME 854 Continuum Mechanics for Soft Tissues (3). An introductory course in the analysis of the mechanical behavior of materials modeled on the continuum assumption. The course will provide background on soft tissue properties and will focus on the tools necessary to model soft tissues, including the essential mathematics, stress principles, kinematics of deformation and motion, and viscoelasticity. Prerequisite: ME 311 or equivalent. LEC

ME 860 Advanced Mechanical Engineering Problems (1-3). An analytical or experimental study of problems or subjects of immediate interest to a student and faculty member and which is intended to develop students capability for independent research or application of 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 861 Theory of the Finite Element Method (3). Finite element method for solid mechanics, heat transfer, fluid mechanics, and dynamics. Modeling techniques, software implementation, and solution of problems. Prerequisite: ME 508 or equivalent. LEC

ME 862 Finite Element Method for Transient Analysis (3). Advanced treatment of dynamic and transient response for linear and nonlinear problems in solid mechanics, heat transfer, fluid mechanics, and dynamics. Modeling techniques, solution methods. Prerequisite: ME 861 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 882 Advanced Control Systems (3). Advanced methods in the modeling, analysis and design of linear and nonlinear control systems. Topics include but not limited to digital controls methods, energy-based modeling, and state-space methods. Prerequisite: ME 682. LEC

ME 890 Special Topics (1-5). Advanced courses on special topics of current interest in mechanical engineering, given as the need arises. Prerequisite: Approval of instructor. RSH

ME 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.) THE

ME 901 Doctor of Engineering Internship (1-12). A twelve month internship in industry or government for doctor of engineering candidates. The student is supervised by a preceptor at the internship site. Bimonthly progress reports are to be filed with the student’s advisory committee. One credit hour per month of internship. FLD

ME 961 Finite Element Method for Nonlinear Problems in Solid Mechanics (3). Advanced treatment of finite element techniques for structural analysis including material and geometric non-linearity as well as large strain deformation. Prerequisite: ME 861 or equivalent. LEC

ME 962 p-Approximation, Error Estimation, and Other Advanced Topics in the Finite Element Method (3). Advanced treatment of p-Approximation, error estimation, and other advanced topics in the finite element method. Prerequisite: ME 861 or equivalent. LEC

ME 965 Mathematical Modeling and Computational Method in Multi-scale Processes (3). An overview of classical averaging and homogenization methods, as well as current multi-scale modeling techniques for the analysis of the micro- and nano-mechanics of materials. Models and numerical techniques are introduced based on continuum as well as particle descriptions. Assignments include the simulation of micro- and nano-mechanics problems by using existing finite element software and molecular dynamics packages. Prerequisite: ME 861 and ME 840. LEC

ME 990 Special Topics (1-5). Advanced courses on special topics of current interest in mechanical engineering, given as the need arises. Prerequisite: Approval of instructor. RSH

ME 999 Independent Investigation (1-16). An analytical or experimental investigation of an engineering problem requiring independent research. Twenty four hours as a minimum are awarded for the Ph.D. dissertation. An original contribution suitable for publication in a refereed journal is required of Ph.D. candidates. Twenty four credit hours as a minimum are awarded for the Ph.D. project. The D.E. candidate will have technical and supervisory responsibility for a multiperson project and a formal final project report suitable for publication is required. THE

In the past fiscal year, research awards at KU soared 13 percent to a record $218 million, a nearly 50 percent increase in the past five years.
Graduate Catalog

International students in fine arts: paper $60, online $55.
Application fees: Domestic students in fine arts: paper $55, online $45.
Information about performances is available online at www.arts.ku.edu/musicdance or www.lied.ku.edu.

School of Fine Arts

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See pages 12-14 for admission procedures.

Application fees: Domestic students in fine arts: paper $55, online $45.
International students in fine arts: paper $60, online $55.

Graduate Programs in Related Fields ................................................................ 180
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 offers a Master of Arts degree with a major in visual art 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.

Contact the departments for admission requirements. See Admission in the General Information chapter of this catalog.

Facilities

The 130,000-square-foot Art and Design Building houses all major art and design programs, including studios and offices. The building houses the 2,100-square-foot Art and Design Gallery, which features new exhibitions every two weeks and is an important component of the teaching mission. Each major program offers all students spacious work areas and a wide range of equipment, from traditional to the newest digital technology. Students have access to multiplatform computer labs with the most commonly used current software for photography, animation, CAD, 3-D, video production, desktop publishing, scanning, illustration, large- and medium-format plotters, and color and black-and-white laser printers. Unique satellite computer areas throughout the building are dedicated to textile design, printmaking, interior design, and visual communication. Students have access to a traditional Photography Lab, which includes a dark room for black-and-white photography, a digital processing lab, dedicated spaces for project photography, and an equipment checkout facility. The 6,400-square-foot Common Shop includes a wide range of woodworking equipment, a plastic vacuum former, metal-working equipment, and a classroom space. All labs and the shop have technical support staff.

There are three large, well-equipped painting studios. The print studios consist of 8,000 square feet of work space and a dedicated computer lab for serigraphy, lithography, and intaglio. The intaglio studio has five presses and a separate acid room. The lithography studio has three presses and various sizes of stones. The serigraphy studio has 12 printing stations, a separate wash-out room, and a large exposure unit, available for a variety of photo-based processes. The sculpture studio is divided into five general work areas with appropriate equipment: woodworking, metal fabrication, foundry, an open courtyard, and individual studios. The foundry contains equipment necessary for casting with a variety of kilns, three gas-fired furnaces, and an overhead crane. There is an induction furnace with a lift-swing unit for bronze and a tilt box unit for iron and steel. Graduate students have individual studios.

The Center for Design Research, housed in a converted native limestone farmhouse and barn on the west edge of campus, serves as a resource for testing design research for industry partners and has involved faculty and students from industrial design and interior design. Corporate-sponsored projects are supervised by design faculty and executed by graduate students and advanced undergraduates selected through portfolio review. This fully equipped facility has become a connection between the academic and professional worlds of design as well as a focus for collaborations among applied design areas and other KU units including special education, aerospace engineering, and business.

The 3,800-square-foot Metalsmithing/Jewelry studio has six rooms with separate areas for soldering, smithing, plating/electro-forming, a finishing room, casting, gas and TIG welding, enameling, and a student-operated supply store. Computer software is available for students to develop three-dimensional jewelry models. The Ceramics area includes 5,300 square feet of studio space in the Art and Design building as well as separate west-campus Chamney barn facilities. Kilns include salt, soda, cross-draft wood, anagama wood fired, raku, an electric test kiln, and several kinds of gas and electric kilns. The Textile Design area has separate weaving, screenprinting, sewing, and dye areas. The weaving studios are equipped with four-, eight-, and 16-harness floor looms and two 16-harness AVL computodobby looms. The sewing area includes traditional machines, sergers, and a computer-aided embroidery machine. The textile computer lab offers weaving programs including jacquard weaving CAD software and other general graphics programs. All areas provide studio spaces for graduate students.

The Helen Foresman Spencer Museum of Art houses the only comprehensive art collection in Kansas. 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 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. The museum houses galleries and offices; an auditorium; the Kress Foundation Department of Art History; and the Murphy Art and Architecture Library, with 150,000 volumes and 600 current journals documenting art, design, and architecture from all cultures, from antiquity to the present. Murphy Hall, named for former KU chancellor Franklin D. Murphy, houses the Department of Music and Dance. It is a five-level facility with offices for faculty members in applied music, music theory and composition, musicology, opera, music education, music therapy, and ensembles. Designed for music and theatre, it contains four performance areas. Crafton-Preyer

KU’s Spencer Museum of Art, www.spencerart.ku.edu, one of the nation’s premier university art museums, offers a collection of nearly 36,000 artworks and artifacts in all media.

The 2,100-square-foot Art and Design Gallery features new exhibitions of art by students and faculty members every two weeks.
Theatre provides a venue for plays, operas, musical theatre shows, and concerts. It is a fully equipped, 1,188-seat proscenium stage facility. William Inge Memorial Theatre is an intimate black-box facility with seating for up to 125, suitable for plays and small opera productions. Swarthout Recital Hall, a 340-seat facility with exceptional acoustics, is dedicated to faculty and student solo and chamber music presentations and occasional opera productions. The Baustian Theatre, a black-box facility for opera and musical theatre productions, seats 125 and has a dressing room and wardrobe area, set construction and storage area, and office and performance control areas. Murphy Hall also houses classrooms, practice rooms, rehearsal halls, and storage facilities for instruments and sheet music. The Electronic Music Studio contains a digital workstation for the recording and production of electronic music and video.

The Kansas Center for Music Technology in Murphy Hall promotes the development and application of current technologies in music instruction, research, and creative projects. Its Computer Center contains 32 fully networked multimedia workstations. KCMT has a library of commercially available software for evaluation, experimentation, and integration into existing courses. The lab also contains three high-end workstations for professional-quality digital audio, digital video, and DVD authoring. The library includes basic productivity and Internet software; music notation and sequencing, ear-training, CD-ROMs, and drill design software; and digital editing software for audio, video, multimedia, and Web authoring. Through graduate and undergraduate workshops and music technology courses, KCMT helps faculty members and students develop innovative new software. It offers graduate teaching assistantships for applicants with experience in music technology.

Robinson Center houses the studios and offices of the dance division. There are three large dance studios with basket-weave floors, including the 125-seat Elizabeth Sherbon Dance Theatre.

The Thomas Gorton Music and Dance Library in Murphy Hall houses more than 111,000 scores, books, sound recordings, videos, microforms, and serials, and has the leading music collection in the Great Plains. It features digital workstations; study carrels; comfortable seating; and public display of new acquisitions, current periodicals, and special exhibitions. Students can make full use of music and dance information resources. The Joe and Joyce Hale Media System allows remote listening and viewing from 30 locations in the library, including 328 media carrels, the seminar room, and the group study room. Media carrels have remote controls, MIDI music keyboards, mini-disk recorders, computers, and video monitors.

The Music Education and Music Therapy Complex in Murphy Hall contains a model music education classroom, a general music instruction classroom, large and small therapy clinical spaces, three research spaces, faculty offices, the Psychology and Acoustics of Music Laboratory, and the Music Therapy Clinic, a clinical training and research facility.

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 is the venue for the Lied Center Series, including the Concert Series, Swarthout Chamber Music Series, New Directions Series, Broadway Series, World Series, and 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 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. Its aesthetics are enhanced by three magnificent stained glass windows designed by Peter Thompson, former dean of Fine Arts.

Tickets for KU music and theatre performances are available from the Lied Center box office, (785) 864-ARTS, or from the Murphy Hall box office, (785) 864-3982.

KU fine arts faculty members have performed at the Kennedy Center, the Lincoln Center for the Performing Arts, and Carnegie Hall.
Graduate Studies in Art & Design: M.F.A. in Art

M.F.A. in Art
Chair: Dawn Guernsey
Graduate Director: Gina Westergard
Art and Design Bldg., 1467 Jayhawk Blvd., Room 300
Lawrence, KS 66045-7531, www.arts.ku.edu/art, (785) 864-4401

Professors: Carter, Guernsey, Katz, Lubensky, McCreA
Professors Emeriti: Gee, Green, Schira, Shimomura, Sudlow, Tefft, Thompson
Associate Professors: Asbury, Blackhurst, Dishinger, Hachmeister, Thompson
Associate Professors Emeriti: Burnham, Wright, Vesafo
Assistant Professors: Bitters, Burke, Luoma, McManus, Nam, Park

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 1.

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 and fee online at www.graduate.ku.edu/GAPC. Send one official transcript of all college and university course work to

The University of Kansas
Graduate Application Processing Center
1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

Send three letters of recommendation, statement of purpose, slide portfolio, slide information sheet, application form for financial assistance, self-addressed stamped return mailer, and statement of financial resources and proof of proficiency in English (international students) to

The University of Kansas
Director of Graduate Studies, Art and Design
1467 Jayhawk Blvd., Room 300
Lawrence, KS 66045-7531

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 consisting of three members of the graduate art faculty. The committee advises the student, conducts regularly scheduled reviews of the work, and determines whether the requirements for the thesis have been completed. The 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)

Seminar
Directed study III .................................................. 4
Art department electives .......................................... 15
Studio or general electives ....................................... 12
Graduate-level academic electives ............................ 9
Thesis ................................................................. 11

Art Courses
ART 500 Special Topics in Art: (1-3).
ART 540 Professional Activities Seminar (1).
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 appointment for regularly scheduled ABS 101 or ABS 102 course. Credit earned does not satisfy any credit requirements for a degree. May be repeated for credit. Graded on satisfactory/unsatisfactory basis. RSH
ART 861 Directed Reading in Art (1-3). Prerequisite: Permission of instructor. RSH
ART 898 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/or F basis.) Repeat for credit in subsequent semesters. SEM

Work by student and faculty artists and artisans is displayed in the Kansas Union Gallery and in the Art and Design Gallery.

The Department of Design presents the Hallmark Design Symposium Series every two weeks throughout the academic year, bringing nationally and internationally prominent designers, artists, art critics, and visual art educators to campus.
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. THE

■ 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

■ Expanded Media Courses
EXM 501 The Digital Image II (3).
EXM 503 Intermedia II (3).
EXM 535 Expanded Media III (3).
EXM 536 Expanded Media III, Honors (3).
EXM 537 Expanded Media IV (3).
EXM 538 Expanded Media IV, Honors (3).
EXM 539 Special Problems Expanded Media (3).
EXM 541 Graduate Performance Art (3).
EXM 542 Graduate Installation Art (3).
EXM 543 Graduate: The Digital Image (3).
EXM 545 Graduate Intermedia (3).
EXM 546 Graduate Expanded Media V (3).
EXM 846 Graduate Expanded Media VI (3). Continuation of Expanded Media studio research. Prerequisite: Permission of instructor. LAB
EXM 946 Graduate Expanded Media VII (3). Continuation of Expanded Media studio research. Prerequisite: Permission of instructor. LAB

■ 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 688. 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 579 Special Problems in Printmaking (3).
PRNT 662 Printmaking V (3).
PRNT 663 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 579 and permission of instructor. RSH
PRNT 827 Printmaking VII (3). Continuation of PRNT 663. 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 556 Sculpture IV (3).
SCUL 558 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: Gregory Thomas

Graduate Director: Gina Westergard

Art and Design Bldg., 1467 Jayhawk Blvd. Room 300 Lawrence, KS 66045-7531, www.arts.ku.edu/dsgn (785) 864-4401

Professors: Branham, Dooley, Eckersley, Greene, Havener, Lau, Rake, Swindell, Thomas

Associate Professors: Dykes, Mann-Coats, Reiber, Schira

Assistant Professors: Fitzgerald, Hofstra, Iversen, M. Jordan, Kowalchuk, Rashid, Stanionis, Stone, Tveit, Varney, Vertacnik, Westergard, Wong

Associate Professors Emeriti: Brejcha, Valanne

Lecturers: L. Jordan, Kemnitzer, Kuhn, Maude, Sampson-Talleur, Staples

Admission

By permission of the Kansas Board of Regents, application for admission to graduate programs in the Department of Design may be refused if available instructional space does not allow addition of more students. The quota of new students who can be accepted into these programs is sometimes filled by February 1.

Students in design must have undergraduate backgrounds judged by the graduate faculty to be appropriate preparation for the specialization selected. 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 3.0 on a 4.0 scale overall and in the proposed major, and to have had a minimum of 9 hours of credit in art history. A student applying in industrial design must present evidence of substantial achievement as a practicing professional.
Submit your application and fee online at www.graduate.ku.edu/GAPC. Send one official transcript of all college and university course work to

The University of Kansas
Graduate Application Processing Center
Strong Hall, 1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

Send three letters of recommendation, statement of design philosophy, slide portfolio, slide information sheet, application form for graduate teaching assistantships, self-addressed stamped return mailer, statement of financial resources (international students), and proof of proficiency in English (international students) to

The University of Kansas
Director of Graduate Studies, Art and Design
1467 Jayhawk Blvd., Room 300
Lawrence, KS 66045-7531

M.F.A. Degree Requirements

The program consists of a minimum of two years of full-time study and requires 60 credit hours, including thesis or exhibition, in courses approved by the department and by the graduate faculty committee. A student may concentrate on one or more specializations. Students seeking the M.F.A. in design participate in a first-year review and a second-year review before beginning thesis work. The student must pass each review level to take course work applicable to the next level. Failure to pass a review results in termination of study.

A typical program in design includes

- Graduation seminar in design ......................................................................... 4-6
- Directed reading in design ............................................................................... 3
- Area concentration ............................................................................................ 24
- Graduate-level academic electives (Art history including HA 706 Seminar on Special Problems in Art History: Philosophy of Art, architecture, design history, or other graduate-level academic course) .................................................. 9
- Electives .............................................................................................................. 9
- Thesis .................................................................................................................. 9-11

The final departmental requirements may be satisfied under one of two options:

1. Presentation of a written thesis and an oral examination.
2. An exhibition of the student’s work and a catalog of the exhibition. The catalog must include a statement about the work with particular relevance to the exhibit and a visual record of the exhibition. An oral examination covering the 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 710 Advanced Human Factors in Interaction Design (3). The study of human factors principles and guidelines are fundamental to interaction design. In this course, these principles will be illustrated and applied to real-world design projects/problems. Human physical and cognitive capabilities, computer-human interface and systems properties, interaction design methods, and the physical and socio-cultural environment will be considered. Fundamental issues in human-centered systems, basic research methods, including statistics and literature searches, will be included. Open only to university students. Graduate students will meet concurrently with INDD 510 and receive additional coursework. LEC.
ADS 712 Design Strategies and Methods (3). This course will cover the principles of design thinking, design processes, design strategies and methods, including techniques and tools for the development of human-technology interfaces. Abstract representations of concrete representations through methods and techniques will be applied to interaction design projects/problems. Information collection and analysis methods, scenario and prototyping methods, evaluation methods (empirical), creativity methods, and task-oriented method (non-empirical) will also be studied. Methods common to design-related disciplines in the social sciences, business, architecture, communication studies and engineering will be integrated. Graduate students will meet concurrently with INDD 512 and receive additional work. Prerequisite: Consent of instructor for all non-design students. LEC.
ADS 714 Designing Business Services and Consumer Experiences (3). Business products, services and environments are often intermingled in ways that require more holistic ways of thinking and development. A challenge of service innovation is to develop with an understanding of the many dimensions of the experience and satisfaction. This course elaborates how, where, when, and why design can enhance the value of business services. Theory, methods, and practice aspects of services design are presented. LEC.
ADS 720 Graduate Seminar in Design (1). Comparative studies of various areas of specialization in design. Repeat for credit to a maximum of six credit hours. LEC.
ADS 722 Crafts Area Graduate Critique/Seminar (1). Group critique of individual research/artwork and discussion of professional practices and contemporary issues in crafts and art. Open to all craft area graduate students. Repeat for credit to a maximum of six credit hours. Graded satisfactory/unsatisfactory. LEC.
ADS 730 Directed Reading in Design (1-3). Research reading and presentation of reports on specific subjects related to the students major area of specialization. Required of all graduate students. RSH.
ADS 731 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 745 Branding and Design (3). A rapidly changing marketplace demands business strategy that is rooted in the dynamics of human culture, society, and psychology. Design thinking directly engages such factors and is, thus, well suited to help organizations formulate effective, versatile and strategic brands. This class focuses on design and simulation offers ways to vividly representing a future that is different from the past. This course presents theory, methods and practice aspects of design scenario construction and simulation. LEC.
ADS 751 Creating Design Scenarios and Simulations (3). Most organizations are imaginatively challenged and experience difficulty innovating and marketing new concept offerings. Conventional methods spotting and validating new opportunities often lack the persuasive power necessary for change to occur. Scenario-based design and simulation offers ways to vividly representing a future that is different from the past. This course presents theory, methods and practice aspects of design scenario construction and simulation. LEC.
ADS 760 Design and Strategic Innovation (3). As companies struggle with the demand to design new products, services, and environments which offer significant experiential value to people and economic value to organizations. This course engages the comprehensive subject of design for human experience. Building on the gamut of human factors and design methods knowledge, this offers hands-on experience in the research, analysis, modeling and simulation of original and experientially compelling design solutions. Prerequisite: ADS 710, ADS 712 or with consent of instructor. LEC.
ADS 770 Design Cognition (3). In a science of design, the study of ‘human designers’ is as important as the study of designed artifacts or design tools. Since the beginning of research in Design Cognition, many empirical studies have opened up our understanding or human designers and the ways they design. While design is largely a mental activity, it interacts strongly with heterogeneous external representations. It encompasses problem definition and solving, analogical mappings, men-
tal imaging and other mental processes. It requires team coordination and is situated in a cultural milieu that defines roles and modes of behavior. As such, distributed cognition, situated cognition, and social cognition - all have become relevant to the understanding of design cognition. The structure of a design task, the mental representation of design form and behavior, the structure of design teams, and the associated concepts of design cognition will be the subject of the course. LEC.

**ADS 810 Orientation Seminar (1)** Studies directed to development of a thesis plan. Required of all graduate students. Offered in fall semester only. Graded S or F. LEC

**ADS 850 Studio Teaching Practice (1)** Graduate students only. Must hold an assistant instructor or teaching appointment. Credit earned does not satisfy any credit requirement for a degree. Graded S or F. FLD

**ADS 860 Graduate Synthesis and Applications Seminar (1)** Group discussion and presentations on timely industry topics. Topics will be substantial, bridging relevant program subjects and professional area boundaries. May be repeated for up to six credit hours in subsequent semesters. LEC

**ADS 861 Thesis Research Seminar (1)** Approaches to producing original design research. Methods, resources, topics and projects are discussed and evaluated. May be repeated for up to six credit hours in subsequent semesters. LEC.

**ADS 890 Thesis (1-8)** For guidance refer to Design department graduate guidelines. THE

### Ceramics Courses

- **CER 504 Kilns (3)**
- **CER 505 Clay and Glaze Formulation (3)**
- **CER 506 Production (6)**
- **CER 715 Ceramics (2-6)** Individual research. Prerequisite: CER 515 or equivalent. RSH
- **CER 725 Glass (2-6)** Individual research. Prerequisite: Approval of instructor. RSH
- **CER 815 Ceramics (2-6)** Continuation of CER 805. RSH
- **CER 825 Glass (2-6)** Individual research. Prerequisite: Approval of instructor. RSH

### Industrial Design Courses

- **IND 508 Materials and Processes (3)**
- **IND 510 Human Factors in Design (4)**
- **IND 512 Methods in Design (3)**
- **IND 524 Packaging Design (3)**
- **IND 578 Problems in Industrial Design: _____ (3)**
- **IND 646 Industrial Design III (3)**
- **IND 648 Industrial Design IV (3)**
- **IND 655 Portfolio (1)**
- **IND 678 Advanced Problems in Industrial Design (3)**
- **IND 680 Thesis (3-6)**
- **IND 715 Industrial Design (2-6)** Research-oriented advanced study in industrial design. Prerequisite: Graduate major in industrial design or consent of instructor. RSH
- **IND 815 Industrial Design (2-6)** Prerequisite: IND 715. RSH

### Interior Design Courses

- **INTD 503 Interior Programming (3)**
- **INTD 504 Interior Planning and Design (3)**
- **INTD 505 Interior Specifications (3)**
- **INTD 506 Advanced Interior Planning and Design (3)**
- **INTD 535 Portfolio (1)**
- **INTD 570 Design Seminar: _____ (1)**
- **INTD 606 Thesis I (3)**
- **INTD 607 Professional Observation (3)**
- **INTD 608 Thesis II (3)**
- **INTD 609 Interior Design Internship (13)**
- **INTD 715 Interior Design (2-6)** Individual research. Prerequisite: INTD 606 or equivalent. RSH
- **INTD 815 Interior Design (2-6)** Continuation of INTD 715. RSH

### Metalsmithing/Jewelry Courses

- **METL 501 Seminar (3)**
- **METL 515 Advanced Metals (6)**
- **METL 715 Metals/Jewelry (2-6)** Individual research. Prerequisite: METL 515 or equivalent. RSH
- **METL 815 Metals/Jewelry (2-6)** Continuation of METL 715. RSH

### Textile Design Courses

- **TD 504 History of Textiles, Lecture (3)**
- **TD 515 Senior Studio I (3-6)**
- **TD 520 Senior Studio II (3-6)**
- **TD 715 Textile Design in Weaving, Printing, and Dyeing (2-6)** Individual research. Prerequisite: TD 520 or TD 525 or equivalent. RSH
- **TD 750 Graduate Seminar (0.50)** Discussion of issues and/or work in textiles. Graded on satisfactory/unsatisfactory basis. LEC
- **TD 815 Textile Design in Weaving, Printing, and Dyeing (2-6)** Continuation of TD 715. RSH

### Visual Communication Courses

- **VISC 514 Graphic Design IV (6)**
- **VISC 515 Illustration III (6)**
- **VISC 520 Hallmark Symposium Series (0.50)**
- **VISC 524 Senior Problems Studio (6)**
- **VISC 525 Animation for Illustration (6)**
- **VISC 534 Portfolio/Professional Practice (1)**
- **VISC 535 Illustration IV (6)**
- **VISC 540 The Arts (3-6)**
- **VISC 550 Visual Communication Internship (3-6)**
- **VISC 560 Special Topics in Visual Communication: _____ (3-6)**
- **VISC 703 Illustration (3-6)** LAB
- **VISC 706 Graphics (3-6)** LAB
- **VISC 815 Graphics (2-6)** Individual research. RSH
- **VISC 825 Illustration (2-6)** Individual research. RSH

## M.F.A. in Scenography

For information about the M.F.A. in scenography, see Theatre and Film in the College of Liberal Arts and Sciences chapter of this catalog.

## M.A. in Visual Art Education

Division Director: Denise Stone
Graduate Director: Gina Westergard
Art and Design Bldg., 1467 Jayhawk Blvd., Room 300
Lawrence, KS 66045-7531, (785) 864-4401
Associate Professors: Kowalchuk, Stone

The graduate program includes advanced professional and scholarly study for art educators and art museum educators, an initial certification program for those with baccalaureate degrees in other fields who wish to enter art education (initial certification typically also requires collateral undergraduate study), and advanced study for individuals in related disciplines. Details may be found in the visual art education M.A. handbook, available from the division office.

### Admission

Admission requirements for regular status:

1. Admission requires a bachelor’s degree from an accredited institution that encompasses a minimum of 40 semester hours in fine arts studio (courses in drawing, painting, sculpture, design, printmaking, ceramics, silversmithing, weaving, lettering, commercial art, graphic design, constructive design, etc.), 9 hours in history of art, and 8 hours in visual art education. Applicants must have an overall undergraduate grade-point average of at least 3.0 on a 4-point scale. Students can be admitted to study art museum education if they have a bachelor’s degree with course work in fine arts studio and/or history of art comparable to that required for the B.A.E. (48 hours in studio and 15 hours in art history), B.A. in art history (27 hours in art history and 3 hours in studio), or B.F.A. in art history (30 credit hours in art history, 30 credit hours of studio training) in these fields at KU. Students with degrees in another field (business, education, etc.) are expected to have the minimum entrance requirements for a master’s degree in art history at KU (18 hours in art history including two survey courses).

2. One official transcript.

3. A minimum of three letters of recommendation from former or current instructors and/or those able to recommend the applicant on the basis of professional experience (i.e., principals, supervisors, or former employers). The letters of recommendation must address the applicant’s potential to take initiative as a graduate student and ability to be a self-starter.

4. Completion of the Graduate Student Information Questionnaire, available in 300 Art and Design, is required.
Submit your application and fee online at www.graduate.ku.edu/GAPC. Send one official transcript of all college and university course work to
The University of Kansas
Graduate Application Processing Center
Strong Hall, 1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7355

Send three letters of recommendation, graduate student information questionnaire (available in 300 Art and Design), statement of financial resources (international students), and proof of proficiency in English (international students) to
The University of Kansas
Director of Graduate Studies, Art and Design
1467 Jayhawk Blvd., Room 300
Lawrence, KS 66045-7351

M.A. Degree Requirements
There are two emphases:

Traditional Art Education Emphasis. At least 15 and no more than 18 hours in visual art 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.

Art Museum Education Emphasis. Students take between 21 and 28 hours in visual art 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 art 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 art 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 Art Education Courses

VAE 500 Student Teaching in: _____ (1-6).
VAE 520 Instructional Technology in Art Education (3).
VAE 530 Art and Design in Daily Life (3).
VAE 596 Practicum in Teaching Art (2).
VAE 598 Special Course: _____ (1-5).
VAE 600 Evaluation and Measurement in Art Education (3).
VAE 620 Instruction and Curriculum I (3).
VAE 680 Internship in Teaching Art (3).
VAE 695 Technical Colloquium: Art Museums and Schools (3).
VAE 698 Education of Women in the Arts (2-3).
VAE 710 Assessment in Art Education (3). The course is designed to introduce students to evaluation procedures in art education as they apply to public school teaching K-12. The material will incorporate methods of evaluating student learning in art, the effectiveness of instruction, the designing of instruments, grading procedures including the provision of feedback to students, parents, and schools. Concepts and skills for both formative and summative evaluation will be related to the development of objectives, instruction, and curriculum development as a whole. LEC

VAE 718 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

VAE 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

VAE 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

VAE 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

VAE 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 art education. Prerequisite: T&L 601 or equivalent. LEC

VAE 798 Special Course: _____ (1-5). A special course of study to meet current needs of education professionals; primarily for graduate students. LEC

VAE 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

VAE 825 Seminar in: _____ (1-4). LEC

VAE 830 Seminar in: _____ (1-4). LEC

VAE 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

VAE 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

VAE 869 History of Art Education (3). A study of the historical development of art education. Prerequisite: Nine hours of education. LEC

VAE 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

VAE 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

VAE 895 Field Experience in: _____ (1-6). Supervised and directed experiences in selected professional settings and cooperating agencies. Prerequisite: Permission of instructor. FLD

VAE 897 Independent Study (1-4). Prerequisite: Consent of adviser and instructor. RSH

VAE 898 Master’s Project (1-4). RSH

VAE 899 Master’s Thesis (1-6). THE

VAE 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 qualitative and quantitative evaluation of arts programs. Prerequisite: T&L 703 or equivalent. LEC

VAE 929 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

VAE 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

VAE 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. LEC

VAE 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 and 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

VAE 997 Individual Study (1-6). Prerequisite: Prior graduate course work in the area of study and consent of instructor. RSH

VAE 998 Seminar in: _____ (1-4). LEC

VAE 999 Doctoral Dissertation (1-15). THE
At least a 3.0 grade-point average, overall and in the major area, is required for all course work counted toward any graduate degree in music. If the overall grade-point average falls below 3.0, the student is placed on probation for one semester; if the average is not 3.0 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 M.M. committees must have three members. D.M.A. committees must have four members. The M.M. committee must have only one member who represents the combined musicology and music theory faculties. D.M.A. committees must have one from each 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 (3).
- **MUS 686** Arts Administration: Presenting the Performing Arts (3).
- **MUS 732** Twentieth-century Techniques before 1945 (3). A study and analysis of music from the turn of the century to World War II. For non-music majors. Prerequisite: Permission of instructor. LEC
- **MUS 733** Twentieth-century Techniques after 1945 (3). A study and analysis of music from World War II to the present. For non-music majors. Prerequisite: Permission of instructor. LEC

### Dance

Division Director: Jerel Hilding

Robinson Center, 1301 Sunnyside Ave., Room 251
Lawrence, KS 66045-7567, (785) 864-4264
Professor: Hamburg

Associate Professors: 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).

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KU’s music and dance department is recognized as a regional leader in music, theatre, and voice studies.

Application procedures and program requirements constantly change. See www.arts.ku.edu/musicdance for current information.
DANC 740 Introduction to Laban Movement Analysis: Effort/Shape Writing and his system of Labanotation. Several applications of Laban’s notational systems will be studied as they appear in cross-cultural, developmental, psychological, and sociological research. Emphasis will be placed on refining the student’s ability to perceive, describe, and notate human movement of all kinds from everyday gestures to highly trained movement skills. Prerequisite: DANC 740 or consent of instructor. LEC

DANC 742 Laban Movement Observation, Analysis, and Notation (3). Two systems of symbolic movement notation will be used in this course: Rudolf Laban’s Effort/Shape Writing and his system of Labanotation. Several applications of Laban’s notational systems will be studied as they appear in cross-cultural, developmental, psychological, and sociological research. Emphasis will be placed on refining the student’s ability to perceive, describe, and notate human movement of all kinds from everyday gestures to highly trained movement skills. Prerequisite: DANC 740 or consent of instructor. LAB

DANC 740 Laban Movement Analysis: Effort/Shape Writing and his system of Labanotation. Several applications of Laban’s notational systems will be studied as they appear in cross-cultural, developmental, psychological, and sociological research. Emphasis will be placed on refining the student’s ability to perceive, describe, and notate human movement of all kinds from everyday gestures to highly trained movement skills. Prerequisite: DANC 740 or consent of instructor. LEC

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 in: _____ (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: Scott Watson, scwatson@ku.edu
Murphy Hall, 1530 Naismith Dr., Room 120
Lawrence, KS 66045-3102, (785) 864-9738
Professors: Bushouse, Watson
Assistant Professors: Bobo, Davidson, Leisring, Stevens

Organ, Carillon, and Church Music
Division Director: Michael Bauer, mbauer@ku.edu,
346 Murphy Hall, (785) 864-9744
Professors: Bauer, Higdon
Associate Professor: Berghout (carillon)

Piano
Division Director: Richard Reber, rreber@ku.edu,
310 Murphy Hall, (785) 864-9643
Professors: Costa, Reber, Winerock
Professors Emeriti: Angeletti, Downs
Associate Professors: Ferrell, Hepp, Koenig

Strings
Division Director: Edward Laut, elaut@ku.edu,
316 Murphy Hall, (785) 864-9659
Professor: Laut
Professor Emeritus: Boyajan
Associate Professors: Chun, Sayevich
Assistant Professor: Hughes

Voice/Opera
Division Director: John Stephens, jastephe@ku.edu,
306 Murphy Hall, (785) 864-9617
Professors: Castle, Stephens
Professor Emeritus: Crawford
Associate Professors: Ferrell, Ocel
Assistant Professors: Broxholm, Mendez

Woodwinds
Division Director: Margaret Marco, mmarco@ku.edu,
340 Murphy Hall, (785) 864-9719
Professors: Gnojek, Mallett
Professors Emeriti: Boulton, Hawkins
Associate Professor: Marco
Assistant Professors: Fedele, Stomberg, Zelnick

Master of Music degree programs are offered in accompanying, bassoon, carillon, cello, church music, clarinet, double bass, euphonium, flute, French horn, harp, oboe, opera performance, organ, percussion, piano, saxophone, trumpet, trombone, tuba, viola, violin, and voice.

Admission

The applicant must perform an audition before the faculty of the major performance division. In some cases, an audio recording may be submitted in lieu of a live performance. A complete list of repertoire studied, including past recital programs, should be furnished to major division faculty members at the time of audition or submission of the tape recording.

Students in opera performance must take a minimum of one year each in French, German, and Italian before entering graduate study 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. Students found deficient in a particular area of diction must enroll in the specific course in which they are deficient and pass it with a minimum grade of C or demonstrate proficiency by passing a diction diagnostic examination. A student whose transcript shows she or he has passed a particular language diction course normally is considered proficient in the diction of that language.

M.M. Degree Requirements

A final solo recital is required for all master’s degrees in performance. Students majoring in piano also are expected to perform a chamber music recital or a full concerto. Students majoring in opera performance also must perform a significant role in at least one fully staged production. A recital preview is left to the discre-
tion of the faculty members of each division. In divisions with no preview requirement, the option to have a preview is still available to students and faculty members. Divisions must approve recital content well in advance but no less than three weeks before the recital date. The candidate must file a professional-quality CD recording of the final recital with the 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 and music theory ............ 9-12
- ACMP 822 The Accompanist’s Literature ............................ 3
- Electives ............................................................................. 0-3

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 dictation 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, viola, and violin** is as follows:

- Advanced applied music ................................................. 12
- MUSC 801 Music Bibliography and Research .................. 3
- Advanced courses in musicology and music theory ............ 9-12
- Electives ............................................................................. 0-3

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 ............ 9-12
- 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
- Electives ............................................................................. 1

A recommended program of study in **carillon** is as follows:

- CARI 811 Carillon (advanced applied music) ...................... 12
- MUSC 801 Music Bibliography and Research .................. 3
- Advanced courses in musicology and music theory ............ 9-12
- CARI 804 History of Carillon Literature and Design .......... 3
- CARI 820 Studio Class in Carillon ................................. 0-3
- Electives ............................................................................. 0-3
- Recital .................................................................................. 0

A recommended program of study in **church music (choral conducting emphasis)** is as follows:

- Advanced conducting and score reading .......................... 10
- MUSC 801 Music Bibliography and Research .................. 3
- Advanced courses in musicology and music theory ............ 9
- Advanced courses in church music .................................... 9
- Voice (choral ensemble each semester in residence) .......... 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 (organ emphasis)** is as follows:

- Advanced applied music (organ) ..................................... 8
- MUSC 801 Music Bibliography and Research .................. 3
- Advanced courses in musicology and music theory ............ 6
- Advanced courses in church music .................................... 9
- ORGN 702 Master Class in Organ—Lab (two semesters) .... 0
- ORGN 720 Studio Class in Organ—Lab (each semester in residence) ................................................................. 0
- *COND 711 and COND 712 Choral Conducting I and II .......... 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

**Significant role in a fully staged opera production**

The written diagnostic examinations in musicology and music theory are not required in the opera performance program.

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**Brass**

### Brass Courses

- **BRSS 652 Brass Choir (0-1)**
- **BRSS 921 Seminar in Performance and Pedagogy.** (3). Repertoire, performance practice, pedagogical concerns relating to the music for brass instruments throughout their history. Topics will include the physical development of the instruments, their usage as solo, chamber, and large ensemble instruments in both sacred and secular literature, and a survey of historical and modern bibliographic materials. May be repeated for credit when topics vary. IND

### Euphonium Courses

- **EUPH 622 Euphonium (1-4)**
- **EUPH 711 Euphonium (1-4). For graduate students not majoring in euphonium. May be repeated for credit. Summer session limit one to three hours. IND**
- **EUPH 811 Euphonium (1-6). For graduate students majoring in euphonium. May be repeated for credit. IND**

### Trombone Courses

- **TROM 622 Trombone (1-4)**
- **TROM 652 Trombone Choir (0-1)**
- **TROM 711 Trombone (1-4). For graduate students not majoring in trombone. May be repeated for credit. Summer session limit one to three hours. IND**
- **TROM 811 Trombone (1-6). For graduate students majoring in trombone. May be repeated for credit. Summer session limit one to three hours. IND**
- **TROM 961 Directed Performance (1-6). Individual instruction. Open only to students who have been admitted to the D.M.A. curriculum in trombone. May be repeated for credit. Summer session limit one to three hours. RSH**
- **TROM 965 Doctoral Recitals (1-3). THE**
- **TROM 970 D.M.A. Lecture-Recital (1-6). A lecture-recital and scholarly paper on a subject pertinent to the student’s major field. Open only to candidates for the D.M.A. in performance. May be repeated for credit. Prerequisite: Consent of instructor. RSH**
- **TROM 972 D.M.A. Document (1-6). A scholarly paper on a subject pertinent to the student’s major field. Open only to candidates for the D.M.A. in performance and conducting. May be repeated for credit. Prerequisite: Consent of instructor. THE**

### Trumpet Courses

- **TRUM 622 Trumpet (1-4)**
- **TRUM 652 Trumpet Ensemble (0-1)**
- **TRUM 711 Trumpet (1-4). For graduate students not majoring in trumpet. May be repeated for credit. Summer session limit one to three hours. IND**
- **TRUM 811 Trumpet (1-6). For graduate students majoring in trumpet. May be repeated for credit. Summer session limit one to three hours. IND**
- **TRUM 961 Directed Performance (1-6). Individual instruction. Open only to students who have been admitted to the D.M.A. curriculum in trumpet. May be repeated for credit. Summer session limit one to three hours. RSH**
- **TRUM 965 Doctoral Recitals (1-3). Maximum credit, seven hours. THE**
- **TRUM 970 D.M.A. Lecture-Recital (1-6). A lecture-recital and scholarly paper on a subject pertinent to the student’s major field. Open only to candidates for the D.M.A. in performance. May be repeated for credit. Prerequisite: Consent of instructor. RSH**
- **TRUM 972 D.M.A. Document (1-6). A scholarly paper on a subject pertinent to the student’s major field. Open only to candidates for the D.M.A. in performance and conducting. May be repeated for credit. Prerequisite: Consent of instructor. THE**
## Tuba Courses

**ORGN 601 Institute for Organ and Church Music (1-2).**
**ORGN 608 Organ Pedagogy (2).**
**ORGN 622 Organ (1-6).**
**ORGN 702 Master Class in Organ—Lab (0).** A class in the performance of advanced organ repertoire. For organ majors only or by consent of instructor. May be repeated. 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

## Tuba-Euphonium Consort Course

TUE 652 Tuba-Euphonium Consort (0-1).

## Church Music

### Church Music Courses

**CHUR 921 Seminar in Church Music (1-2).** Studio performance of repertoire for students who have been admitted to the D.M.A. curriculum in tuba. May be repeated for credit. Summer session limit one to three hours. IND
**CHUR 961 Directed Performance (1-6).** Individual instruction. Open only to students who have been admitted to the D.M.A. in performance. May be repeated for credit. Summer session limit one to three hours. RSH

**TUBA 970 D.M.A. Lecture–Recital (1-6).** A lecture-recital and scholarly paper on a subject pertinent to the student’s major field. Open only to candidates for the D.M.A. in performance. May be repeated for credit. Prerequisite: Consent of instructor. RSH

**TUBA 972 D.M.A. Document (1-6).** A scholarly paper on a subject pertinent to the student’s major field. Open only to candidates for the D.M.A. in performance and conducting. May be repeated for credit. Prerequisite: Consent of instructor. THE

### Church Music Courses

**CHUR 821 Church Music Colloquium I: Anthem Literature (1).** A survey of significant anthem literature. Prerequisite: Permission of instructor. LEC
**CHUR 822 Church Music Colloquium II: Handbells (1).** Handbell history, literature, performance, and rehearsal techniques. Prerequisite: Permission of instructor. LEC
**CHUR 823 Church Music Colloquium III: Children’s Choirs (1).** A study of the history and literature of children’s choirs, vocal characteristics of children, and rehearsal procedures with the children’s choir. Prerequisite: Permission of instructor. LEC
**CHUR 824 Church Music Colloquium IV: Hymnology (1).** A study of the historical development of hymnody. Prerequisite: Permission of instructor. LEC
**CHUR 921 Seminar in Church Music (3).** Discussion of the history of sacred music, religion and the arts, and aesthetics. May be repeated for credit when topics vary. LEC
**CHUR 962 Improvisation (2).** Applied study in improvisation at the organ. Prerequisite: Permission of instructor. LEC

### Keyboard

**ACMP 527 Accompanying (1-4).**
**ACMP 529 Performance Class in Accompanying (1).**
**ACMP 727 Accompanying (1-4).** Individual instruction in vocal and or instrumental accompanying. Prerequisite: Consent of instructor. IND
**ACMP 811 Advanced Accompanying (1-6).** For graduate students majoring in accompanying. May be repeated for credit. Summer session limit one to three hours. IND
**ACMP 822 The Accompanist’s Literature (3).** A course in which major vocal and instrumental works are studied with vocal or instrumental participants. LEC

### Carillon Courses

CARI 621 Carillon (1-4).
CARI 711 Carillon (1-4). IND
CARI 804 History of Carillon Literature and Design (3). A survey of carillon literature and design. Prerequisite: Permission of instructor. LEC
CARI 811 Carillon (1-6). For graduate students majoring in carillon. May be repeated for credit. Prerequisite: Permission of instructor. IND
CARI 820 Studio Class in Carillon (0). Studio performance of repertoire for students enrolled in carillon. Prerequisite: Permission of instructor. IND

### Harpsichord Courses

HPCD 621 Harpsichord (1-4).
HPCD 711 Harpsichord (1-4). Summer session limit one to two credits. IND

### Organ Courses

**ORGN 502 Master Class in Organ—Lab (0).**
**ORGN 524 Laboratory in Organ Construction (3).**

**ORGN 603 Institute for Organ and Church Music (1-2).**
**ORGN 608 Organ Pedagogy (2).**
**ORGN 622 Organ (1-6).**
**ORGN 702 Master Class in Organ—Lab (0).** A class in the performance of advanced organ repertoire. For organ majors only or by consent of instructor. May be repeated. 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 720 Studio Class in Organ—Lab (0).** Studio performance of works prepared under individual instruction. May be repeated for credit. 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 exclusive of the German Baroque. Prerequisite: Permission of instructor. LEC
**ORGN 803 History of Organ Literature and Organ Design II (3).** A survey of organ literature and organ design in the German Baroque with special emphasis on J.S. Bach. Prerequisite: Permission of instructor. LEC
**ORGN 804 History of Organ Literature and Design III (1-3).** A survey of organ literature and design from the Classic period to the present. Prerequisite: Permission of instructor. LEC
**ORGN 805 Selected Topics 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. 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: (1) (3).** A detailed study of organ repertoire, performance practice, the history of organ building as it affects the performance of a specific 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 961 Directed Performance (1-6).** Individual instruction. Open only to students who have been admitted to the D.M.A. program in organ. May be repeated for credit. Summer session limit one to three hours. RSH
**ORGN 965 Doctoral Recitals (0-3).** Maximum credit, seven hours. THE
**ORGN 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
**ORGN 972 D.M.A. Document (1-6).** A scholarly paper on a subject pertinent to the student’s major field. Open only to candidates for the D.M.A. in performance and conducting. May be repeated for credit. Prerequisite: Consent of instructor. THE

### Piano Courses

**PIAN 522 Piano Technology I (1).**
**PIAN 523 Piano Technology II (1).**
**PIAN 540 Piano Pedagogy I (2-3).**
**PIAN 546 Piano Pedagogy II (2-3).**
**PIAN 622 Piano (1-5).**
**PIAN 624 Piano Workshop (1-3).**
**PIAN 640 Piano Pedagogy III (2).**
**PIAN 643 Piano Repertoire I (3).**
**PIAN 644 Piano Repertoire 2 (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
**PIAN 811 Piano (1-6).** For graduate students majoring in piano. May be repeated for credit. Summer session limit one to three hours. IND
**PIAN 840 Advanced Piano Pedagogy I: Group and Class Instruction (3).** The techniques and materials for the development of keyboard literacy at the elementary and intermediate levels. LEC
**PIAN 846 Advanced Piano Pedagogy II: Group and Class Instruction (3).** The techniques and materials for the development of keyboard literacy at the elementary and intermediate levels. Prerequisite: PIAN 840. LEC
**PIAN 921 Seminar in Performance and Pedagogy: (1) (3).** A detailed study of repertoire, performance practice, pedagogical, and stylistic problems relating to keyboard music. May be repeated for credit when topics vary. LEC
**PIAN 961 Directed Performance (1-6).** Individual instruction. Open only to students who have been admitted to the D.M.A. curriculum in piano. May be repeated for credit. Summer session limit one to three hours. RSH
**PIAN 965 Doctoral Recitals (1-3).** Maximum credit, seven hours. THE
**PIAN 970 D.M.A. Lecture–Recital (1-6).** A lecture-recital and scholarly paper on a subject pertinent to the student’s major field. Open only to candidates for the D.M.A. in performance. May be repeated for credit. Prerequisite: Consent of instructor. RSH
## Strings

### Chamber Music Courses

- **CHAM 615 University Camerata** (0-1).
- **CHAM 654 New Music Ensemble** (0-2).
- **CHAM 820 Baroque Ensemble** (0-2). Study and performance of 17th- and 18th-century chamber music, using replicas of period instruments. Primarily for woodwinds, strings, and keyboards. IND
- **CHAM 829 Advanced Chamber Music** (0-2). A special study of chamber music works, with or without piano, with emphasis on problems of style and interpretation. May be repeated for credit. IND
- **CHAM 929 Advanced Chamber Music** (0-2). IND

### Double Bass Courses

- **DBBS 622 Double Bass** (1-5).
- **DBBS 711 Double Bass** (1-4). For graduate students not majoring in double bass. May be repeated for credit. Summer session limit one to three hours. IND
- **DBBS 720 Double Bass Performance Class** (1). Studio performance of solo, ensemble, and orchestral audition repertoire for students concurrently enrolled in viol (viola, etc.) study. For freshman and sophomores (120); juniors and seniors (320); graduate student (720) (as appropriate). May be repeated for credit. LEC
- **DBBS 811 Double Bass** (1-6). For graduate students majoring in double bass. May be repeated for credit. IND

### Harp Courses

- **HARP 622 Harp** (1-5).
- **HARP 711 Harp** (1-4). For graduate students not majoring in harp. May be repeated for credit. Summer session limit one to three hours. IND
- **HARP 720 Harp Performance Class** (1). Studio performance of solo, ensemble, and orchestral audition repertoire for students concurrently enrolled in viol (viola, etc.) study. For freshman and sophomores (120); juniors and seniors (320); graduate student (720) (as appropriate). May be repeated for credit. LEC
- **HARP 811 Harp** (1-6). For graduate students majoring in harp. May be repeated for credit. Summer session limit one to three hours. IND

### Strings Courses

- **STRG 701 String Pedagogy Workshop** (0.50-3). A short-term intensive course in string pedagogy intended for school orchestra directors, private teachers, and advanced students. Normally offered during the summer session. May be repeated for credit. Graded on a satisfactory/unsatisfactory basis. IND
- **STRG 921 Seminar in Performance and Pedagogy** (3). Repertoire, performance practice, and pedagogical and stylistic problems relating to stringed instrument music before 1800. LEC
- **STRG 922 Seminar in Performance and Pedagogy** (3). Stringed instrument repertoire from 1800 to 1875. LEC
- **STRG 923 Seminar in Performance and Pedagogy** (3). Stringed instrument repertoire from 1875 to present. LEC
- **STRG 970 D.M.A. Lecture–Recital** (1-6). A lecture-recital and scholarly paper on a subject pertinent to the student’s major field. Open only to candidates for the D.M.A. in performance. May be repeated for credit. Prerequisite: Consent of instructor. RSHE
- **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. THE

### Viola Courses

- **VIOA 622 Viola** (1-5).
- **VIOA 711 Viola** (1-4). For graduate students not majoring in viola. May be repeated for credit. Summer session limit one to three hours. IND
- **VIOA 720 Viola Performance Class** (1). Studio performance of solo, ensemble, and orchestral audition repertoire for students concurrently enrolled in viol (viola, etc.) study. For freshman and sophomores (120); juniors and seniors (320); graduate student (720) (as appropriate). May be repeated for credit. LEC
- **VIOA 811 Viola** (1-6). For graduate students majoring in viola. May be repeated for credit. Summer session limit one to three hours. IND

## Wind and Percussion

### Bassoon Courses

- **BASN 622 Bassoon** (1-4).
- **BASN 711 Bassoon** (1-4). For graduate students not majoring in bassoon. May be repeated for credit. Summer session limit one to three hours. IND
- **BASN 811 Bassoon** (1-6). For graduate students majoring in bassoon. May be repeated for credit. Summer session limit one to three hours. IND
- **BASN 921 Seminar in Performance** (3). A study of repertoire and performance practice relating to the bassoon during the seventeenth and eighteenth centuries. LEC
- **BASN 922 Seminar in Performance** (3). A study of repertoire and extended performance techniques of the 20th century. LEC
- **BASN 961 Directed Performance** (1-6). Individual instruction. Open only to students who have been admitted to the D.M.A. curriculum in bassoon. May be repeated for credit. Summer session limit one to three hours. RSHE
- **BASN 965 Doctoral Recitals** (1-3). Maximum seven hours credit. THE
- **BASN 970 D.M.A. Lecture–Recital** (1-6). A lecture-recital and scholarly paper on a subject pertinent to the student’s major field. Open only to candidates for the D.M.A. in performance and conducting. May be repeated for credit. Prerequisite: Consent of instructor. RSHE

### 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

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KU fine arts faculty members have served as judges for international piano competitions, including the Tchaikovsky Competition in Moscow, the Chopin Competition in Warsaw, and the Van Cliburn Competition in Fort Worth.

The Thomas Gorton Music and Dance Library in Murphy Hall houses more than 111,000 scores, books, sound recordings, videos, microforms, and serials, and has the leading music collection in the Great Plains.
May be repeated for credit. Summer session limit one to three hours. IND

FRHN 711 French Horn (1-4). For graduate students not majoring in French horn. May be repeated for credit. Summer session limit one to three hours. IND

FRHN 811 French Horn (1-6). For graduate students majoring in French horn. May be repeated for credit. Summer session limit one to three credits. IND

FRHN 961 Directed Performance (1-6). Individual instruction. Open only to students who have been admitted to the D.M.A. curriculum in French horn. May be repeated for credit. Summer session limit one to two hours. RSH

FRHN 965 Doctoral Recitals (1-3). THE

FRHN 970 D.M.A. Lecture–Recital (1-6). A lecture-recital and scholarly paper on a subject pertinent to the student’s major field. Open only to candidates for the D.M.A. in performance. May be repeated for credit. Summer session limit one to three credits. 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

Oboe Courses

OBOE 622 Oboe (1-4). IND

OBOE 652 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

PCUS 961 Directed Performance (1-3). THE

PCUS 965 Doctoral Recitals (1-3). THE

PCUS 972 D.M.A. Document (1-6). A scholarly paper on a subject pertinent to the student’s major field. Open only to candidates for the D.M.A. in performance and conducting. May be repeated for credit. Prerequisite: Consent of instructor. THE

Wind and Percussion Courses

W&P 630 Orchestral Repertoire (1).

W&P 655 Independent Study in: ______ (1-4).

W&P 702 Special Studies in Woodwind Instrument Pedagogy (1-3). Physiological factors of woodwind playing, teaching materials and techniques, practice methods, solo and chamber 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

Swartworth Recital Hall, a 340-seat facility with exceptional acoustics, is dedicated to faculty and student solo and chamber music presentations and occasional opera productions.

The Kansas Center for Music Technology in Murphy Hall promotes the development and application of current technologies in music instruction, research, and creative projects.

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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

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. LEC

VOIC 706 Advanced Vocal Literature II (3). An investigation of the development of German lied. 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 I (1). Solo vocal performance in a class situation with emphasis including the preparation, presentation 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, unembellished English pronunciation will be studied. The International Phonetic Alphabet will be employed. IND

VOIC 811 Voice (1-6). For graduate students majoring in voice. May be repeated for credit. Summer session limit one to three hours. IND

VOIC 820 Vocal Coaching (1-4). In-depth investigation of elements of vocal performance such as: language, musical style, tradition, dramatic content and the communication of text. Open to graduate voice majors with consent of instructor. IND

VOIC 890 Opera Workshop (0-4). The study of various aspects of opera, such as character development, aria, chorus, and opera scene study, staging, body movement, and audition techniques. May be repeated for credit. ACT

VOIC 892 Opera Production (2-4). The preparation and performance of an opera role. May be repeated for credit. ACT

VOIC 900 Directed Study in: _______ (1-3). Investigation of a special topic or project. Prerequisite: Consent of instructor. LEC

VOIC 921 Seminar in Performance: _______ (3). A detailed study of vocal repertoire, performance practice, and stylistic problems on a selected topic from areas such as oratorio, cantata, song cycles, chamber music, song, or opera of specific composers (i.e., Verdi, Wagner, Mozart, Debussy, Poulenc, Wolf, Strauss) or 20th-century song. May be repeated for credit. LEC

VOIC 960 Vocal Pedagogy (2). A study of the problems encountered in the teaching of vocal technique, such as breathing, resonance, tone color, dynamic control, and diction, and including sessions of supervised teaching. LEC

VOIC 961 Directed Performance (1-6). Individual instruction. Open only to students who have been admitted to the D.M.A. curriculum in voice. May be repeated for credit. Summer session limit one to three hours. RSH

VOIC 965 Doctoral Recitals (1-3). Maximum seven hours credit. THE

VOIC 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 and conducting. May be repeated for credit. Prerequisite: Consent of instructor. RSH

VOIC 972 D.M.A. Document (1-6). A scholarly paper on a subject pertinent to the student’s major field. Open only to candidates for the D.M.A. in performance and conducting. May be repeated for credit. Prerequisite: Consent of instructor. THE

M.M. in Music Theory or Composition

Division Director: James Barnes, jbarenes@ku.edu Murphy Hall, 1530 Naismith Dr., Room 222 Lawrence, KS 66045-3102, (785) 864-4514

Professor: Barnes

Professors Emeriti: Hoag, Mattila, Pozdro, Shumway

Associate Professors: Holmberg, McGee

Assistant Professors: Haahelm, Murphy, Pierce

Admission

Applicants are expected to have educational backgrounds equivalent to the B.A., the B.M. in music theory, or the B.M. in composition from KU. Applicants should submit copies of compositions and/or research papers in music theory as well as recordings, if available. Applicants are expected to have a reading knowledge of German, French, Italian, or Spanish. A language deficiency may be satisfied after acceptance into the program. In addition to the required course work, students are encouraged to continue study of performance and participate in ensembles on their major instruments.

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 History of Music Theory .................................... 3
Thesis ................................................................................. 6

Composition

Advanced composition .............................................. 8
Advanced musicology and music theory ......................... 12
MUSC 801 Music Bibliography and Research .............. 3
Thesis ................................................................................. 6
Recital ................................................................................ 1

Music Theory and Composition Courses

MTHC 541 Eighteenth-century Counterpoint (3).
MTHC 542 Sixteenth-century Counterpoint (3).
MTHC 559 Scoring for Concert Band (2).
MTHC 583 Composition (2).
MTHC 610 Form and Analysis (3).
MTHC 655 Readings in Music Theory: _______ (1-4).
MTHC 670 Scoring for Voice (3).
MTHC 674 Orchestration I (3).
MTHC 676 Orchestration II (3).
MTHC 678 Electro-acoustic Composition I (3).
MTHC 680 Electro-acoustic Composition II (3).

MTHC 732 Twentieth-century Techniques before 1945 (3).
A study and analysis of music from the turn of the century to World War II. Prerequisite: MTHC 315 or MTHC 316.

MTHC 733 Twentieth-century Techniques after 1945 (3).
A study and analysis of music from World War II to the present. Prerequisite: MTHC 315 or MTHC 316.
MTHC 741 Canon and Fugue (3).
A study of strict imitation and fugal writing. Practi-
cal work in two, three, and four parts in various media. Prerequisite: MTHC 541.
MTHC 778 History of Music Theory (3).
A historical survey of music theory, both practical and speculative, from the ancient Greeks to the late 20th century. (Same as MUSC 778.) LEC

MTHC 789 Seminar on Selected Topics: _______ (0.50-3).
Topics vary by semester. May be repeated for credit. LEC

MTHC 801 Analytical Techniques (3).
A survey of the principal theories of musical analysis, including Schenkerian analysis, set theory, serial theory, and semiol-
ogy. Prerequisite: MTHC 510 or an equivalent course in music forms. LEC

MTHC 820 Advanced Tonal Analysis (3).
An investigation of formal types, processes and functions in the instrumental tonal music of the eighteenth and nineteenth centuries. Prerequisite: Permission of instructor. LEC

MTHC 820 Seminar in Schenkerian Analysis (3).
A study of the theories and analy-
cal methodologies developed by the Austrian theorist Heinrich Schenker. Pre-
requisite: MTHC 510 or permission of the instructor. LEC

MTHC 825 Computers in Music and Music Research (3).
A seminar designed to develop and explore the use and programming of microcomputers as an aid in re-
search and the production of music. Topics will include composition and produc-
tion tools for music, structured program design, data representation, and basic
Graduate Studies in Music & Dance: M.M. in Music Theory or Composition, M.M. in Musicology

M.M. in Musicology

Division Director: Paul Laird, plaird@ku.edu
Murphy Hall, 1530 Naismith Dr., Room 334
Lawrence, KS 66045-3102, (785) 864-9716

Professors: Barnes, Laird
Professor Emeritus: Politoske
Assistant Professors: R. Schwartz, Wong

Admission

Applicants are expected to have educational backgrounds equivalent to the B.A. or B.M. in musicology from KU. Applicants are expected to have a reading knowledge of German, French, Italian, or Spanish. A language deficiency may be satisfied after entrance into the program. Proficiency at the piano is encouraged. Applicants must submit samples of original scholarly writing. In addition to the required course work, students are encouraged to continue study of performance or composition.

M.M. Degree Requirements

The course work for the M.M. degree is as follows:

Musicology courses in the MUSC 650-MUSC 794 sequence .................................................. 9
MUSC 654 or MUSC 656 Collegium Musicum ................................................................. 2
Advanced music theory courses .......................................................... 3
MUSC 801 Music Bibliography and Research ............................................................... 3
MUSC 940 Seminar on Selected Topics in Musicology: ................................................... 3
MUSC 899 Thesis ............................................................................................................. 6
Electives in music performance ...................................................................................... 4

M.M. in Musicology Courses

MUSC 560 Music in World Cultures (3).
MUSC 650 Selected Topics in Music: ______ (0.50-3).
MUSC 654 Collegium Musicum, Vocal (0-1).
MUSC 655 Readings in Music Theory: ______ (1-4).

MUSC 656 Collegium Musicum, Instrumental (0-1).
MUSC 744 Readings in Jazz and American Popular Music (1-3). Investigation of a subject by means of directed study of primary resources. Prerequisite: Permission of instructor. IND
MUSC 752 Music of the Middle Ages (3). Prerequisite: MUSC 320. LEC
MUSC 753 Music of the Renaissance (3). Prerequisite: MUSC 340. LEC
MUSC 754 Music of the Baroque Era (3). Prerequisite: MUSC 340 and MUSC 440. LEC
MUSC 755 Music of the Classical Era (3). Prerequisite: MUSC 440. LEC
MUSC 756 Music of the Romantic Era (3). Prerequisite: MUSC 440 and MUSC 480. LEC
MUSC 757 Music of the 20th Century (3). Prerequisite: MUSC 480. LEC
MUSC 758 History of Musical Instruments (3). Prerequisite: MUSC 340 or MUSC 440 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 757.) Prerequisite: One course in the field of music history or permission of the instructor. LEC
MUSC 760 History of Opera (3). Prerequisite: MUSC 340, MUSC 440, and MUSC 480. LEC
MUSC 761 History of the Mass (3). Prerequisite: MUSC 340 and MUSC 440, or permission of instructor. LEC
MUSC 765 History of Chamber Music (3). Prerequisite: MUSC 440 and MUSC 480, or permission of instructor. LEC
MUSC 775 History of Keyboard Music (3). Prerequisite: MUSC 340, MUSC 440, and MUSC 480. LEC
MUSC 777 History of Solo Vocal Music (3). Prerequisite: MUSC 340, MUSC 440, and MUSC 480. 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 20th 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 musicology courses numbered 500 or above and consent of instructor. IND
MUSC 801 Music Bibliography and Research (3). Bibliography, research methods, and scholarly writing in music for entering graduate students. Prerequisite: Permission of instructor. LEC
MUSC 802 Advanced Music Bibliography and Research (3). Advanced bibliographic and writing of research papers. Prerequisite: MUSC 801. LEC
MUSC 899 Thesis (1-6). THE

The Collegium Musicum gives performances of early vocal and instrumental music using KU’s collection of replicas of early instruments.

KU’s master of music program is tied for 12th in the nation in the 2007 edition of U.S. News & World Report’s “America’s Best Graduate Schools.”
M.M. in Conducting

Band Conducting
Division Director: Scott A. Weiss
Murphy Hall, 1530 Naismith Dr., Room 124
Lawrence, KS 66045-3102, (785) 864-3561

Choral Conducting
Division Director: John Paul Johnson, choir@ku.edu,
328 Murphy Hall, (785) 864-9699

Orchestral Conducting
Division Director: David Neely,
126 Murphy Hall, (785) 864-4499

Professors: Bauer, Foster, Johnson
Professors Emeriti: Priestman, Ralston
Associate Professors: Daugherty, Gailey, Stidham
Assistant Professors: Neely, Tucker

Admission

Applicants are expected to have educational backgrounds equivalent to the B.M. or B.M.E. degree (including a course in form and analysis) from KU. They should have one or two years of experience in conducting. Such experience may include work in public school, college, or with other amateur or professional ensembles. Applicants normally are expected to have a high level of performing ability on an instrument or in voice. Applicants must complete audition-interviews successfully before the divisional faculty 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 consisting 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 CD recording of the final recital with the Department of Music and Dance before the final examination is scheduled.

A recommended program of study in band and orchestral conducting (minimum of 30 hours) is as follows:

MUSC 801 Music Bibliography and Research .............................................. 3
Advanced conducting and score-reading ............................................. 10-12
Advanced courses in musicology and music theory ......................... 11-12
Electives .................................................................................................. 3-6

Band and orchestral conducting majors must be enrolled in an ensemble during each semester of residence.

A recommended program of study in choral conducting (minimum of 30 hours) is as follows:

MUSC 801 Music Bibliography and Research .............................................. 3
Advanced courses in musicology and music theory ......................... 11-12
Choral conducting/score reading (must include COND 811) ........... 6-8
Choral literature ...................................................................................... 6
Seminar conducting/rehearsal .............................................................. 3-6
Electives .................................................................................................. 1-3

Choral conducting majors must be enrolled in an ensemble during each semester of residence.

Band Courses

BAND 501 Workshop in: ____ (0.50-3).
BAND 559 Scoring for Concert Band (2).
BAND 602 Wind Ensemble (0-1).
BAND 630 Band Repertoire (2).
BAND 701 Workshop in: ____ (0.50-3). 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 Oread 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: ____ (0.50-3). May be repeated for credit. LEC

CHOR 805 Interpretation of Choral Music (1). A study of the essential factors necessary for the understanding and subsequent interpretation of various compositions of advanced choral music. Offered in the summer session only. LEC

CHOR 820 Orchestral Bowing Techniques for Choral Conductors (1). Stylistic, expressive, and technical considerations essential for making effective bowing decisions. Prerequisite: A course in conducting. LAB

CHOR 825 Choral Diction (3). Study of methods to teach and learn diction in choral music contexts. Attention to International Phonetic Alphabet, acoustic implications of particular phonemes, and contributions of emerging technologies. Application of various languages, including English, Latin, Italian, French, German, and Spanish. (Same as MMT 825.) LEC

CHOR 826 Adolescent Changing Voices (2). Scientific approaches to the pedagogy of adolescent male and female voices during voice change. (Same as MMT 826.) LEC

CHOR 827 Children’s Voices (2). Scientific approaches to understanding and working with unchanged children’s voices. (Same as MMT 827.) LEC

CHOR 828 Science-based Voice Education (3-6). Comprehensive examination of vocal anatomy, phonation, phonation, resonance, articulation, and voice development, with particular attention to research-based vocal/choral pedagogies for working with child through senior adult voices. (Same as MMT 828.) Prerequisite: Permission of instructor. LEC

CHOR 830 Sacred Choral Repertoire (2). A study of anthems for Lectionary years A, B, and C. For church choir directors and church music majors. May be repeated for credit. Prerequisite: Consent of instructor. LAB

CHOR 850 Choral Arranging (2). Techniques of arranging for large and small choral groups, with and without accompaniment. Prerequisite: MTHC 253 or consent of instructor. LEC

CHOR 910 Research Methodologies in Choral Music (3). This course will provide the student with an overview of historical, analytical, qualitative, and quantitative approaches used in the research of choral music and issues related to teaching and conducting in the choral field. LEC

Conducting Courses

COND 711 Choral Conducting I (2). Fall semester. A study of conducting techniques as they pertain to stylistic interpretation of choral music from the Renaissance, Baroque, and Classical periods. The building of a choral repertoire. Prerequisite: MMT 246, MMT 330, and/or consent of instructor. RSH

COND 712 Choral Conducting II (2). Spring semester. A continuation of COND 711. Interpretative analysis of stylistic characteristics of the Romantic and contemporary periods. Prerequisite: MMT 246, MMT 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 limit one to three hours. Prerequisite: Four hours of conducting and/or consent of instructor. IND

COND 820 Advanced Choral Conducting and Rehearsal Techniques (3). Refinement of conducting and teaching skills in a choral setting. Focus on relationships between gesture and choral sound, rehearsal structure and optimal learning, and age-appropriate choral literature and development of musicianship. (Same as MMT 820.) LAB

COND 821 Advanced Score Reading (2). Development of fluency in reading full scores at the piano. May be repeated for credit. Prerequisite: Two semesters of COND 791 or consent of instructor. RSH

COND 822 Choral Literature—Late Baroque Era to Classical Era (3). LEC

COND 823 Choral Literature—Romantic Era (3). LEC

COND 824 Choral Literature—Contemporary Era (3). LEC

COND 845 Advanced Instrumental Conducting (3). A study of techniques needed to project the conductor’s concept in rehearsal and performance. Participating in rehearsals under the supervision of the instructor. May involve conducting in public performance. May be repeated for credit. Prerequisite: Consent of instructor. RSH

COND 921 Seminar (3). Choral literature from 1450 to 1650. LEC

COND 931 Seminar (3). Symphonic repertoire. LEC

COND 932 Seminar (3). Operatic repertoire. LEC

COND 933 Seminar (3). Soloists and orchestra. LEC

COND 941 Seminar: Band Literature: ____ (3). A study of literature for wind band including original works and transcriptions. May be repeated for credit when topic varies. LEC
Graduate Studies in Music & Dance: M.M. in Conducting, M.M.E. in Music Education & Music Therapy

COND 961 Directed Performance (1-6). Open only to students who have been admitted to the D.M.A. program in conducting. May be repeated for credit. Summer session limit one to three hours. RSH
COND 965 Doctoral Recitals (1-2). Maximum credit, four hours. THE
COND 970 D.M.A. Lecture-Recital (1-6). A lecture-recital and scholarly paper on a subject pertinent to the student’s major field. Open only to candidates for the D.M.A. in conducting. May be repeated for credit. Prerequisite: Consent of instructor. RSH
COND 972 D.M.A. Document (1-6). A scholarly paper on a subject pertinent to the student’s major field. Open only to candidates for the D.M.A. in performance and conducting. May be repeated for credit. Prerequisite: Consent of instructor. THE

■ 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: _____ (0.50-3). 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: Alicia A. Clair, aclair@ku.edu
Murphy Hall, 1530 Naismith Dr., Room 448
Lawrence, KS 66045-3102, www2.ku.edu/~memt, (785) 864-9636
Graduate Director: George L. Duerksen, gduerksen@ku.edu, 432 Murphy Hall, (785) 864-9632
Professors: Bergee, Clair, Duerksen, S. Hedden, Johnson
Professor Emeritus: Radocy
Associate Professors: Colwell, Daugherty, D. Hedden
Assistant Professor: Register

The division’s graduate program includes advanced professional and scholarly study for music educators and music therapists, licensure/certification programs for those with baccalaureate degrees in other fields who plan to enter the music education and music therapy professions (these initial licensure/certification programs typically also require collateral undergraduate study), and advanced study for individuals in related disciplines. Areas of emphasis, curricula, examinations, and regulations and procedures are described in a pamphlet, Graduate Handbook in Music Education and Music Therapy, available at the division office and online at the division Web site above.

Admission
Admission requirements are as follows:
1. Undergraduate grade-point average of 3.0 or higher on a 4.0 scale.
2. An appropriate baccalaureate degree to support the individual’s goals for master’s study. Students seeking entrance into the graduate initial certification programs in music education or music therapy should have substantial backgrounds in music regardless of undergraduate major.
3. Scores on the Graduate Record Examination (verbal, quantitative, analytical writing).
4. Three letters of recommendation.
5. Other supporting materials are required. See www2.ku.edu/~memt for details.

Apply online at www2.ku.edu/GAPC. Send the application, nonrefundable fee, and one official copy of all transcripts to:
The University of Kansas
Graduate Application Processing Center
Strong Hall, 1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535
Send test scores (i.e., Graduate Record Examination, Test of English as a Foreign Language, International English Language Testing System) and all other requested application materials to:
The University of Kansas
Department of Music and Education and Music Therapy
Murphy Hall, 1530 Naismith Dr., Room 448
Lawrence, KS 66045-3102

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 MMT including MMT 812 Research in Music Education and Music Therapy (3 hours), MMT 899 Master’s Thesis (3-5 hours), and additional hours to reach the minimum elected from MMT 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 MMT, 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-MMT 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 MMT 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 MMT 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 MMT.

Proficiency as a performing musician must be demonstrated before the degree may be awarded. This proficiency normally is demonstrated through the videotaped audition described in the MMT Graduate Application Procedure Document.

KU was the first university to offer a graduate program in functional music, now music therapy.

The Music Therapy Clinic is an clinical training and research facility that offers assessment and treatment programs for clients from the university and the community.

Regarded as the birthplace of music therapy, KU produces more music therapists than any school in the nation.
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.

**Nonthesis Option.** Students may elect to earn the M.M.E. with a major in music education or the M.M.E. with a major in music therapy using the nonthesis option, which functions as a terminal degree. The nonthesis option requires a total of 37 hours of credit. This includes a minimum of 33 credit hours of graduate required core courses including (except for thesis) the distributions described above for the appropriate degree, an additional 3-credit-hour project (MEMT 895 Master's Project), and a 1-credit-hour comprehensive final examination (MEMT 898 Comprehensive Examination).

### Music Education and Music Therapy Courses

**MEMT 500 Student Teaching in: _____** (1-6).
**MEMT 596 Clinical Internship** (1-15).
**MEMT 597 Individual Study:** (1-15).
**MEMT 598 Special Course:** (1-5).
**MEMT 616 Advanced Pedagogy and Materials:** (1).
**MEMT 651 Sociocultural Influences on Musical Behavior** (3).
**MEMT 670 Acoustics of Music** (3).
**MEMT 700 Streamlining/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 710 Professional Development** (1). Participation in approved professional development experiences. Prerequisite: documentation of attendance, an annotated time log of activities, and a short paper. May be repeated up to 3 credit hours. FLD
**MEMT 711 Emerging Technologies for Choral Teaching and Learning** (2-3). Applications of current digital and electronic technologies to choral ensemble teaching and learning. LEC
**MEMT 753 Psychology and Acoustics of Music** (5). Psychological and acoustical bases of music and human musical behavior. Study of musical sound production, transmission, perception, cognition, response, and reproduction. Laboratory component and research project required. LEC
**MEMT 760 Principles of Music Therapy** (3). An overview of the music therapy profession including, but not limited to, history, philosophy, areas of clinical practice, necessary skills and competencies, and career opportunities. LEC
**MEMT 761 Clinical Techniques for Children** (3). Music therapy treatment techniques (setting goals, selecting/applying treatment, monitoring, evaluating results) for children in a variety of settings. Clinical observation and application of techniques will be course components. FLD
**MEMT 762 Clinical Techniques for Adults** (3). Music therapy treatment techniques (setting goals, selecting/applying treatment, monitoring, evaluating results) for adults in a variety of settings. Clinical observation and application of techniques will be course components. FLD
**MEMT 763 The Influence of Music on Behavior I** (3). A study of the various effects of music. The place of functional music in music education. Investigation of effective media and techniques. The relation of technology to 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 concerning the physiological, psychological, and social responses of persons to music. In addition, this course includes current trends in the field along with regulatory guidelines concerning practice development, implementation, and evaluation, ethical and legal considerations. 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 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 methods, strategies, approaches, and materials for music education/music therapy for specific populations, musical media, instructional settings, or curricular 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). A study of research in 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 that affect the place of music in the 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). A comprehensive study of the elements that contribute to current educational programs (many of all of these may be anticipated dependent upon the class participants' needs): curriculum, standards, assessment, classroom management, pedagogy, leadership, organizational structure, budget and finance, scheduling, federal mandates, and administrative practices. LEC
**MEMT 817 Methodologies in Music Education** (3). A survey of music 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 819 Music in Early Childhood** (2). Child development as related to musical development, including implications for participation in music from birth through age seven. Current trends in goals, objectives, materials, equipment, facilities, training and evaluation will be discussed. LEC
**MEMT 820 Advanced Choral Conducting and Rehearsal Techniques** (3). Rehearsal techniques and teaching skills in the choral setting. Focus on relationships between gesture and choral sound, rehearsal structure and optimal learning, and age-appropriate choral literature and development of musicality. (Same as CHOR 820.) LAB
**MEMT 823 Seminar in:** (1-3). LEC
**MEMT 825 Choral Diction** (3). Study of methods to teach and learn diction in choral music contexts. Attention to International Phonetic Alphabet, acoustic implications of particular phonemes, and contributions of emerging technologies. Application of various languages, including English, Latin, Italian, French, German, and Spanish. (Same as CHOR 825.) LEC
**MEMT 826 Adolescent Changing Voices** (2). Scientific approaches to the pedagogy of adolescent male and female voices during voice change. (Same as CHOR 826.) LEC
**MEMT 827 Children's Voices** (2). Scientific approaches to understanding and working with unchanged children's voices. (Same as CHOR 827.) LEC
**MEMT 828 Science-based Vocal Education** (3-6). Comprehensive examination of vocal science, including respiratory, phonation, resonance, articulation, and voice development, with particular attention to research-based vocal/choral pedagogies for working with child through senior adult voices. (Same as CHOR 828.) Prerequisite: Permission of instructor. LEC
**MEMT 830 Leadership and Program Development in Music Education** (2-3). A comprehensive study of the elements of management, leadership, organizational structure, budget and finance, federal mandates, and administrative practices. LEC
**MEMT 835 Practical Applications of Advanced Methodology in the Music Classroom** (2-3). A comprehensive study and application of the elements that constitute current practice in methodology and pedagogy in the music classroom: encompassing elementary general, choral, orchestral, and band music. LEC
**MEMT 838 Orff Applications in Music Education and Music Therapy** (2). The use of the Orff-Schulwerk approach in music education and music therapy. Course includes historical background, philosophical approach and practical application of the process. Prerequisite: Admission to professional sequence or permission from MEMT division. LEC
**MEMT 840 Development and Application of improvization Skills** (2-3). Development and application of individual and group improvisation and their application in professional practice. LEC
**MEMT 845 Curriculum Development in Music Education** (3). Developing a practical and useful music curriculum that aligns theoretical/philosophical position, program goals, course objectives, instructional materials, learning activities, and assessments. LEC
**MEMT 850 Measurement of Musical Behavior** (3). Measurement theory applied to the development and administration of measures of musical ability, achievement, and performance. 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

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**Graduate Studies in Music & Dance: M.M.E. in Music Education & Music Therapy**

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**GRADUATE CATALOG**

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**Fine Arts**
MEMT 854 Music Therapy in Pediatrics (2). The use of music therapy in individu-
al and group—often non-musical—settings. Course includes an overview of childhood ill-
nesses, associated medical terminology, and therapy techniques used as context-
tual and procedural support. Prerequisite: Admission to professional sequence or permission from MEMT division. LEC

MEMT 855 Music Therapy in Hospice and Bereavement (2). The use of music-
therapy for hospice clients and their families, as well as clients grieving due to death of a loved one. Course includes historical, theoretical and practical perspectives. Prerequisite: Admission to professional sequence or permission from MEMT division. LEC

MEMT 856 Neurologic Music Therapy (3). The scientific basis for the neurological influence of music on behaviors in physical functioning and cognitive functioning will be explored in rehabilitation and learning models. Clinical experience will be included. Prerequisite: Admission to the graduate program in music therapy or permission of the instructor. FLD

MEMT 857 Music Therapy in Gerontology (2). The theories and clinical ap-
lications of music therapy across the life span of older adults, including the young old, the middle old, and the old old. Special considerations will be given to persons with debilitating conditions including dementia, and to older persons’ professional and family caregivers. Prerequisite: Admission to the graduate program in music therapy or permission of the instructor. FLD

MEMT 858 Music Therapy in Medical Care and Wellness of Adult Persons (3). The theories and practice of music therapy as an enhancement to health and wellness and to medical interventions for adults will include applications within the med-
ical setting and in the home setting. Interventions will include, among others, ap-
proaches for stress management, medical procedural support, pre-operative and post-operative support, follow-up care in catastrophic illness, interventions in post-traumatic stress disorder, and others. Prerequisite: Admission to the graduate program in music therapy or permission of the instructor. FLD

MEMT 860 Assessment in Music Therapy Professional Practice (2). Skills and knowledge needed to assess and evaluate clients, and their effective-
ness, program outcomes, program quality, and quality of care. LEC

MEMT 861 Current Trends in Music Therapy (2). A comprehensive study of the ele-
ments that contribute to current practice in music therapy, but not limited to, pro-
fessional competencies, codes of ethics, assessment and implementation, interven-
tions, leadership, organizational structure, budget and finance, scheduling and management of contracts, grant writing, and other administrative practices. FLD

MEMT 863 The Influence of Music on Behavior II (2). A laboratory and research course to accompany MEMT 763. LEC

MEMT 864 Philosophy and Theory of Music Therapy (3). Concentrated, interdisci-
plinary 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 incorpo-
rates music therapy program design, implementation, and evaluation. The stu-
dent 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 protocols with a clientele(s) of choice. Stu-
dents 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. Stu-
dents will review developmental levels for supervisors and practicum students. Supervision of practicum and practicum students will be conducted in consultation with the course instructor. FLD

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 re-
viewed in consultation with qualified music therapy staff. LEC

MEMT 895 Master’s Project (1-3). LEC

MEMT 897 Independent Study: (1-4). Prerequisite: Consent of adviser and instructor. RSH

MEMT 898 Comprehensive Examination (1). An independent course in prepara-
tion for the non-thesis M.M.E. degree final examination. The grade will be S or U as determined by performance on the examination. Prerequisite: Permission of the instructor. IND

MEMT 899 Master’s Thesis (1-6). THE

MEMT 910 Learning Theories and Music Education (3). 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 ad-
ministration of music education programs at all school levels; topics will include personnel, finance, curriculum, supervision, and articulation of the music pro-
gram with other segments of the school and community. LEC

MEMT 915 Teaching Music in Higher Education (3). Knowledge, skills, and disposi-
tions for graduate students in music who are preparing to teach at the college level. This course is directed toward the end of developing competencies and understand-
ings that will contribute to one’s becoming an effective college/university teacher. LEC

MEMT 923 Seminar (1-3). Graded on a satisfactory/unsatisfactory basis. LEC

MEMT 953 Advanced Acoustical and Psychological Aspects of Musical Behavior (3). Study and experimental investigation of acoustical, psychoacoustical, and psy-
chological phenomena as they influence music. Attention will be given to physical parameters of sound, pitch, loudness, and timbre; magnitude estimation; the-
ories 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 955 Advanced Methods in Experimental and Descriptive Research in Music (3). An advanced study of experimental and descriptive research tech-
niques with careful investigation of research design, experimental control, analy-
sis and manuscript composition. Techniques with careful investigation of research
design, experimental control, analysis and manuscript composition. Techniques
methods and their place in the scholarly schemata will be reviewed. Prerequisite: MEMT 812 or permission of instructor. LEC

MEMT 972 Research in Music Education (2-5). For students who are sufficiently qualified to conduct original investigations in this field. Consent of instructor neces-
sary. IND

MEMT 980 Advanced Topics: (1-3). A special course of study to meet cur-
rent needs of education professionals — primarily for post-master’s level stu-
dents. IND

MEMT 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 stu-
dent, a representative of the cooperating agency, and the advisor. Open only to ad-
vanced 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). THE

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, both 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 résumés 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 ama-
teur or professional ensembles. Applicants normally are expected to have a high level of performing ability on an instrument or in voice. Applicants are expected to submit preliminary audition materials that include a video recording of the applicant con-
ducting in performance and in rehearsal, an audio recording of an ensemble trained and conducted by the applicant, and a pre-
scribed formal analysis project. Details can be found at the band, choral, and orchestral links at www.arts.ku.edu/musicdance. An entrance interview-audition is required for admission. The au-
dition is heard by a committee composed of the graduate fac-
ulty of the conducting divisions. Approval by a majority of the committee is required for acceptance into the program. The au-
dition may include (1) harmonic and melodic dictation and/or

Doctor of Musical Arts
may submit a DVD. The graduate faculty in the ensemble divisions review this recording.

Students applying to the D.M.A. program in choral conducting must display a working knowledge of two of the following four languages: French, German, Spanish, and Italian. A working knowledge normally implies at least two semesters of undergraduate study.

**Performance.** The applicant must be prepared to perform the equivalent of a full master’s recital as deemed appropriate by the major performance division. The audition is heard by a committee of the graduate faculty of the major division. A member of the committee on graduate studies in music also may be invited to attend as a voting member of the committee. Approval by a majority of the committee is required for acceptance into the program. The applicant should consult the major performance division for specific memory and repertoire requirements. The applicant also should submit a comprehensive repertoire list indicating work studied, memorized, performed in public, or ready for immediate performance. In the case of international students, acceptance may be achieved by submitting an audio-tape. 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**
     - Complete MEMT 116 Performance Media: Electronics/Synthesizers/Computer or equivalent.
     - Complete at least one graduate seminar in computer applications in music.
     - Design and implement a substantial project relevant to the candidate’s professional development. This project may be developed using a traditional or music-oriented authorizing system.
   - **Track B**
     - Complete EECS 268 or equivalent.
     - Design and implement a substantial programming project relevant to the candidate’s professional development. This project should be written using a traditional structured or object-oriented programming language.
3. Proficiency in techniques for measurement of quantitative research.

**Advisory Committee.** 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 presented before taking the comprehensive oral examination. 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.

**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 or Other Research Skills requirement, completed most course work, and maintained the quality of work at a satisfactory level, 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

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**KU is the only institution authorized by the Kansas Board of Regents to offer doctoral degrees in music.**

**Crafton-Preyer Theatre provides a venue for plays, operas, musical theatre shows, and concerts. It is a fully equipped, 1,188-seat proscenium stage facility.**
Conducting must have presented one or two of the three required recitals before taking the examinations.

**Final Recital.** After successful completion of the comprehensive oral examination, the candidate in performance or conducting is eligible to present the third recital. This recital, which is analogous to the doctoral dissertation, should occur near the end of the degree program but before completion of the D.M.A. document or the D.M.A. lecture-recital.

**Document, Lecture–Recital, or Large-scale Composition.** No later than the end of the semester after successful completion of the comprehensive examination, candidates in performance, conducting, and composition must submit to the graduate advisory committee a prospectus for a D.M.A. document or D.M.A. lecture-recital. A candidate in composition must submit a prospectus for a large-scale composition. The prospectus for a document or lecture-recital should include a preliminary bibliography and an outline of the content. The composition prospectus should outline a large-scale work for orchestra, with or without soloists, a work for chorus and orchestra, or an opera, and should include a preliminary analysis.

The D.M.A. document is a scholarly paper roughly equivalent in scope to a master’s thesis. The lecture-recital is a public presentation based on a paper written in scholarly form.

Upon satisfactory completion of all other degree requirements, candidates must schedule a final oral examination. For students in performance and conducting, the examination covers the third recital and the research reported in the document or lecture-recital. For students in composition, the examination is primarily a defense of the large-scale composition.

The student must receive at least a grade of B on the document, lecture-recital, or composition for satisfactory completion of degree requirements. Two unbound copies of the work must be submitted to the Graduate Division of the School of Fine Arts. The lecture-recital paper also must include a videotape or CD recording.

**Composition**

Typical program:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Master’s degree in composition</td>
<td>30</td>
</tr>
<tr>
<td>Composition</td>
<td>16</td>
</tr>
<tr>
<td>Advanced theory and score reading</td>
<td>8</td>
</tr>
<tr>
<td>MUSC 801 Music Bibliography and Research</td>
<td>3</td>
</tr>
<tr>
<td>Advanced courses in musicology</td>
<td>3</td>
</tr>
<tr>
<td>MTHC 965 Doctoral Composition Recital (A complete program of original works in various media, in which the composer participates as performer or conductor)</td>
<td>2</td>
</tr>
<tr>
<td>Dissertation (A large-scale work for orchestra, with or without soloists, a work for chorus and orchestra, or an opera, written analysis to be attached)</td>
<td>16</td>
</tr>
<tr>
<td>Electives</td>
<td>6</td>
</tr>
</tbody>
</table>

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:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Master’s degree in conducting or equivalent</td>
<td>30</td>
</tr>
<tr>
<td>Advanced conducting</td>
<td>12-14</td>
</tr>
<tr>
<td>Seminars in repertoire</td>
<td>9</td>
</tr>
<tr>
<td>MUSC 801 Music Bibliography and Research</td>
<td>3</td>
</tr>
<tr>
<td>Advanced courses in musicology and music theory</td>
<td>3</td>
</tr>
<tr>
<td>Recitals</td>
<td>3</td>
</tr>
<tr>
<td>Electives</td>
<td>2</td>
</tr>
</tbody>
</table>

Electives for a minimum of two semesters before entering this program must enroll for two semesters. Students also must be enrolled in a choral ensemble each semester of residence.

**Typical program in choral conducting:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Master’s degree in conducting or equivalent</td>
<td>30</td>
</tr>
<tr>
<td>Advanced choral conducting</td>
<td>12</td>
</tr>
<tr>
<td>Instrumental conducting</td>
<td>12</td>
</tr>
<tr>
<td>Recitals (two organ recitals, one organ or voice recital)</td>
<td>6</td>
</tr>
<tr>
<td>Musicology and music theory</td>
<td>9</td>
</tr>
<tr>
<td>MUSC 801 Music Bibliography and Research</td>
<td>6</td>
</tr>
<tr>
<td>Secondary applied area (organ or voice)</td>
<td>6</td>
</tr>
<tr>
<td>Electives</td>
<td>5</td>
</tr>
</tbody>
</table>

D.M.A. church music majors (choral conducting emphasis) who have not studied voice for a minimum of two semesters before entering this program must enroll for two semesters. Students also must be enrolled in a choral ensemble each semester of residence.

**Typical program in church music (choral conducting emphasis):**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Master’s degree in performance</td>
<td>30</td>
</tr>
<tr>
<td>Advanced courses in organ</td>
<td>6</td>
</tr>
<tr>
<td>Musicology and music theory</td>
<td>9</td>
</tr>
<tr>
<td>MUSC 801 Music Bibliography and Research</td>
<td>12</td>
</tr>
<tr>
<td>Secondary applied area (organ or voice)</td>
<td>6</td>
</tr>
<tr>
<td>Electives</td>
<td>5</td>
</tr>
</tbody>
</table>

**Typical program in church music (organ emphasis):**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Master’s degree in performance</td>
<td>30</td>
</tr>
<tr>
<td>Advanced courses in organ</td>
<td>6</td>
</tr>
<tr>
<td>Musicology and music theory</td>
<td>9</td>
</tr>
<tr>
<td>MUSC 801 Music Bibliography and Research</td>
<td>12</td>
</tr>
<tr>
<td>Secondary applied area (organ conducting)</td>
<td>6</td>
</tr>
<tr>
<td>Electives</td>
<td>3</td>
</tr>
</tbody>
</table>

D.M.A. church music majors (organ emphasis) who have not studied voice for a minimum of two semesters before entering this program must enroll for two semesters. Students also must be enrolled in a choral ensemble for two semesters.

**Typical program in orchestra conducting:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Master’s degree in conducting or equivalent</td>
<td>30</td>
</tr>
<tr>
<td>Advanced choral conducting/score reading (must include COND 961)</td>
<td>8-12</td>
</tr>
<tr>
<td>Advanced courses in musicology and music theory</td>
<td>12</td>
</tr>
<tr>
<td>MUSC 801 Music Bibliography and Research</td>
<td>3</td>
</tr>
<tr>
<td>CHOR 920 Orchestral Bowing Techniques for Choral Conductors</td>
<td>1</td>
</tr>
<tr>
<td>MEMT 923 Seminar in choral conducting</td>
<td>3</td>
</tr>
<tr>
<td>CHOR 910 Research Methodologies in Choral Music</td>
<td>3</td>
</tr>
<tr>
<td>Choral literature</td>
<td>9-12</td>
</tr>
<tr>
<td>Seminar conducting/rehearsal</td>
<td>6-9</td>
</tr>
<tr>
<td>COND 965 Doctoral Recitals</td>
<td>2</td>
</tr>
<tr>
<td>D.M.A. document or lecture-recital</td>
<td>3</td>
</tr>
<tr>
<td>Electives</td>
<td>3-9</td>
</tr>
</tbody>
</table>

**Typical program in orchestral conducting:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Master’s degree in conducting or equivalent</td>
<td>30</td>
</tr>
<tr>
<td>Advanced conducting, score reading, and analysis</td>
<td>16-18</td>
</tr>
<tr>
<td>Seminars in repertoire</td>
<td>9</td>
</tr>
<tr>
<td>MUSC 801 Music Bibliography and Research</td>
<td>3</td>
</tr>
<tr>
<td>Advanced courses in musicology and music theory</td>
<td>12</td>
</tr>
<tr>
<td>Recitals</td>
<td>3</td>
</tr>
<tr>
<td>D.M.A. document or lecture-recital</td>
<td>11-13</td>
</tr>
<tr>
<td>Electives</td>
<td>6</td>
</tr>
</tbody>
</table>

Conducting majors must be enrolled in an ensemble during each semester of residence.

**Areas in Performance**

**Typical program in bassoon, clarinet, flute, oboe, and saxophone:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Master’s degree in performance</td>
<td>30</td>
</tr>
<tr>
<td>Advanced choral conducting</td>
<td>12</td>
</tr>
<tr>
<td>Instrumental conducting</td>
<td>12</td>
</tr>
<tr>
<td>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)</td>
<td>7</td>
</tr>
<tr>
<td>MUSC 801 Music Bibliography and Research</td>
<td>3</td>
</tr>
<tr>
<td>Secondary applied area (organ or voice)</td>
<td>6</td>
</tr>
<tr>
<td>Electives</td>
<td>5</td>
</tr>
</tbody>
</table>

**Typical program in church music (choral conducting emphasis):**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Master’s degree in performance</td>
<td>30</td>
</tr>
<tr>
<td>Advanced choral conducting</td>
<td>12</td>
</tr>
<tr>
<td>Recitals (two organ recitals, one organ or voice recital)</td>
<td>6</td>
</tr>
<tr>
<td>Musicology and music theory</td>
<td>9</td>
</tr>
<tr>
<td>Secondary applied area (organ or voice)</td>
<td>6</td>
</tr>
<tr>
<td>Electives</td>
<td>5</td>
</tr>
</tbody>
</table>

**Typical program in orchestra conducting:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Master’s degree in conducting or equivalent</td>
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<tr>
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<td>8-12</td>
</tr>
<tr>
<td>Advanced courses in musicology and music theory</td>
<td>12</td>
</tr>
<tr>
<td>MUSC 801 Music Bibliography and Research</td>
<td>3</td>
</tr>
<tr>
<td>CHOR 920 Orchestral Bowing Techniques for Choral Conductors</td>
<td>1</td>
</tr>
<tr>
<td>MEMT 923 Seminar in choral conducting</td>
<td>3</td>
</tr>
<tr>
<td>CHOR 910 Research Methodologies in Choral Music</td>
<td>3</td>
</tr>
<tr>
<td>Choral literature</td>
<td>9-12</td>
</tr>
<tr>
<td>Seminar conducting/rehearsal</td>
<td>6-9</td>
</tr>
<tr>
<td>COND 965 Doctoral Recitals</td>
<td>2</td>
</tr>
<tr>
<td>D.M.A. document or lecture-recital</td>
<td>3</td>
</tr>
<tr>
<td>Electives</td>
<td>3-9</td>
</tr>
</tbody>
</table>

**Typical program in orchestra conducting:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
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<tbody>
<tr>
<td>Master’s degree in conducting or equivalent</td>
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<tr>
<td>Advanced choral conducting, score reading, and analysis</td>
<td>16-18</td>
</tr>
<tr>
<td>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)</td>
<td>7</td>
</tr>
<tr>
<td>MUSC 801 Music Bibliography and Research</td>
<td>3</td>
</tr>
<tr>
<td>Secondary applied area (organ or voice)</td>
<td>6</td>
</tr>
<tr>
<td>Electives</td>
<td>5</td>
</tr>
</tbody>
</table>

**Typical program in church music (organ emphasis):**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Master’s degree in performance</td>
<td>30</td>
</tr>
<tr>
<td>Advanced courses in organ</td>
<td>6</td>
</tr>
<tr>
<td>Musicology and music theory</td>
<td>9</td>
</tr>
<tr>
<td>Secondary applied area (organ conducting)</td>
<td>6</td>
</tr>
<tr>
<td>Electives</td>
<td>3</td>
</tr>
</tbody>
</table>

The School of Fine Arts cooperates with the University Theatre in presenting yearly musical comedy and opera productions.

The Bastian Theatre, a black-box facility for opera and musical theatre productions, seats 125 and has a dressing room and wardrobe area, set construction and storage area, and office and performance control areas.
Graduate Studies in Music & Dance: Doctor of Musical Arts, Doctor of Philosophy in Music

Students must enroll in ORGN 702 Master Class in Organ and ORGN 720 Studio Class in Organ each semester in residence.

**Typical program in organ:**
- Master’s degree in performance: 30
- Applied music: 20
- Recitals (three organ recitals): 0
- MUSC 801 Music Bibliography and Research: 7
- Advanced courses in organ: 12
- Advanced courses in church music: 6
- Advanced courses in musicology and music theory: 12
- D.M.A. document or lecture-recital: 3
- Electives: 4

D.M.A. organ majors must be enrolled in ORGN 702 Master Class in Organ and ORGN 720 Studio Class in Organ each semester in residence.

**Typical program in percussion:**
- Master’s degree in performance: 30
- Applied music: 20
- 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
- MUSC 801 Music Bibliography and Research: 3
- Advanced courses in musicology and music theory: 12
- D.M.A. document or lecture-recital: 3
- Electives: 3

*Three to six hours of this total must be chosen from the following: 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
- Recitals (one full recital, to be given in the final semester, plus two of the following: an additional solo recital, a concerto performance, a full chamber music program, or a lecture-recital): 7
- PIAN 840 Advanced Piano Pedagogy I: Group and Class Instruction (graduate teaching assistants only): 3
- MUSC 801 Music Bibliography and Research: 3
- Advanced courses in musicology and music theory: 9-12
- D.M.A. document or lecture-recital: 3
- *Minor concentration (pedagogy or accompanying): 0-3
- Electives: 0-3

*All teaching assistants must enrol in one semester of PIAN 840.

**Typical program in strings:**
- Master’s degree in performance: 30
- Applied music (four semesters, 5 hours per semester): 20
- Recitals (one full recital, to be given in the final semester, plus two of the following: an additional solo recital, a concerto performance, a full chamber music program, or a lecture-recital): 7
- MUSC 801 Music Bibliography and Research: 3
- Advanced courses in musicology and music theory: 12
- D.M.A. document or lecture-recital: 3
- Electives: 3

**Typical program in French horn, trombone, trumpet, and tuba:**
- Master’s degree in performance: 30
- Applied music (four semesters, 5 hours per semester): 20
- Seminar in trombone, trumpet, or tuba: 3
- Recitals (one full recital, to be given in the final semester, plus two of the following: an additional solo recital, a concerto performance, a chamber music program, a lecture-recital): 7
- W&P 704 Special Studies in Brass Instrumental 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
- Electives: 9

**Typical program in voice:**
- Master’s degree in performance: 30
- Applied music (four semesters, 5 hours per semester): 20
- Seminar in voice: 9
- Recitals (one full recital, to be given in the final semester, plus two of the following: an additional solo recital, a major role in an opera, a major solo in an oratorio, a full chamber music program, or a lecture-recital): 7
- MUSC 801 Music Bibliography and Research: 3
- Advanced courses in musicology and music theory: 9-12
- D.M.A. document or lecture-recital: 3
- Electives: 7-10

**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, Portuguese, or Spanish. Reading proficiency must be demonstrated before scheduling the oral comprehensive examination. The student also may be advised to develop reading proficiency in another language or languages in order to pursue research for the dissertation.

**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 take 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 Graduate Studies. With the satisfactory completion of both written and oral comprehensive examinations the aspirant is admitted to candidacy for the degree of Doctor of Philosophy in music.

Dissertation Proposal. No later than the end of the semester after successful completion of the comprehensive examinations, the candidate, in consultation with the faculty dissertation committee, must submit a dissertation proposal of several pages with a preliminary bibliography, outline, and description of the project and research plan.

Final Oral Examination. Following completion of the dissertation, a final oral examination is scheduled in which the candidate presents and defends the results of dissertation research and is expected to respond to questions from the faculty committee. A grade of at least B must be achieved on the dissertation for satisfactory completion of the degree requirements.

Doctor of Philosophy in Music Education

The Doctor of Philosophy emphasizes research and scholarship. It is often sought by those who aspire to careers in research and graduate-level teaching. The requirements help the student develop broad and profound understanding of musical behavior, sophisticated skill and extensive experience in pursuing new knowledge of such behavior, and a rational system for evaluating the relationships between the specialty and other areas of human understanding. The program culminates with completion of a substantial piece of original research.

Course requirements for the doctoral degree are flexible. The Ph.D. program requires a minor. Each student’s program is planned specifically in light of his or her background and to meet the needs of the anticipated academic and professional career. However, each student is expected to achieve a broad understanding of human musical behavior and to become skilled in researching such behavior. Professional competence, not hours of credit per se, is the underlying requisite for conferring the degree.

Detailed information about admission processes and the Division of Music Education and Music Therapy can be found online at www2.ku.edu/~memt.

Admission

Requirements for Regular Admission

1. Master’s grade-point average of 3.5 or higher.
2. Scores on the three basic aptitude subtests (verbal, quantitative, and analytical writing) of the Graduate Record Examination.
3. Three letters of recommendation estimating the applicant’s potential for success in doctoral study.
4. Documentation of at least 18 months of successful full-time experience as a professional music educator or at least three years of successful full-time experience as a professional music therapist.
5. Passing score on the music education and music therapy division diagnostic examination.

Research Skills

Doctoral students in music education and music therapy at KU must demonstrate research skills by completing three research projects suitable for publication. These may be developed and completed independently or in consultation with appropriate doctoral faculty members. There must be a project of each of the following types: descriptive, experimental, and historical (including the history and logic of ideas). The descriptive and experimental research articles should be presented in APA style. The historical research article may be presented in Turabian, MLA, or APA style.

Each completed project is reviewed by the student’s doctoral committee, which rules in the majority whether the project is of sufficient quality for publication in a national, refereed research journal in music education or music therapy. Single-author studies that have been published or accepted for publication in such journals may be used to demonstrate these skills.

Completion of each of the three research projects must be certified by the student’s mentor/adviser in music education or music therapy on the Doctoral Checksheet in the student’s file in the division office. The mentor/adviser must submit an appropriate Do-all form after the completion of each project.

Preliminary and Comprehensive Examinations

The student must pass a series of examinations, culminating with the comprehensive oral examination.

The music education/music therapy Ph.D. handbook, available in the division office, includes information about patterns of course work, the Ph.D. minor, examinations, and the dissertation.

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

KU’s Psychology and Acoustics of Music Laboratory was the first university facility in the U.S. equipped for study of the influence of music on behavior.

KU students and faculty perform in three jazz ensembles and two jazz choirs.

The Lied Center of Kansas houses a 2,020-seat auditorium with excellent acoustic quality and technical production capabilities.
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William Allen White School of Journalism & Mass Communications

Journalism classes have been taught at KU since 1903. The school has been accredited continuously since 1948 by the Accrediting Council on Education in Journalism and Mass Communications.

The William Allen White School of Journalism and Mass Communications is named for the famous Emporia editor whose career began at KU in the 1880s.
Admission Requirements • Graduate Degree Requirements: News/Information & Strategic Communications

Ann M. Brill, Dean
David D. Perlmutter, Associate Dean, Graduate Studies and Research
Stauffer-Flint Hall, 1435 Jayhawk Blvd., Room 200
Lawrence, KS 66045-7575
jschool@ku.edu or www.journalism.ku.edu
Phone: (785) 864-4755, Fax: (785) 864-4396

Professors: Frederickson, Gentry, Musser, Perlmutter, Shaw
Associate Professors: Basow, Bengtson, Brill, Broholm, Guth, Holstead, L. Lee, T. Lee, Marsh, Utsler, Volek
Assistant Professors: Barnett, Geana, Swain, Ward

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 courses 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 and is designed for part-time, evening study to accommodate working professionals.

Admission Requirements

Admission is based primarily on the student’s undergraduate record, references, and results of the Graduate Record Examination. Applicants who have baccalaureate degrees in journalism, as well as those with no academic or professional background in journalism, are eligible to apply for the News/Information or Strategic Communications courses of study. Applicants who have had professional experience must describe it in their applications to be evaluated for exemption from basic skills and professional course requirements.

Applicants for the Marketing Communications course of study (Edwards Campus) must have a minimum of two years of full-time professional experience in marketing communications or other media-related fields. It is offered on the KU Edwards Campus in Overland Park and is designed for part-time, evening study to accommodate working professionals.

Application Deadlines

Students may enter the News/Information, Marketing Communications, and Strategic Communications programs in fall or spring semesters. The application deadline for the fall, which begins in August, is the preceding February 1. The application deadline for the spring, which begins in January, is the preceding November 1.

Application Materials

Applications can be considered only after these items have been submitted:

1. Completed application form, online at www.graduate.ku.edu/GAPC.
2. One official transcript of all college-level courses.
3. Scores on the Graduate Record Examination. Applicants for the Marketing Communications course of study may submit the Graduate Management Admissions Test. Tests must have been taken within the last five years.
4. Three letters of reference from persons familiar with the applicant’s abilities. (At least one letter must come from a former or present college-level professor.)
5. Written, 500-word statement of the applicant’s academic and professional objectives.
6. A current résumé. Applicants for the Marketing Communications course of study also must include one example of professional work that reflect the applicant’s years of experience.
7. Nonrefundable application fee payable to the University of Kansas. See Admission in the General Information chapter of this catalog for more information.
8. International students whose native language is not English also must submit Test of English as a Foreign Language examination scores or International English Language Testing System examination scores.
9. International students must submit proof that they have the financial resources to cover annual expenses.

Submit your application online at www.graduate.ku.edu/GAPC. Send all test scores and original transcripts of all college and university course work to

The University of Kansas
Graduate Application Processing Center
Strong Hall, 1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

Send all other requested application materials to

The University of Kansas
Graduate Director
School of Journalism and Mass Communications
Stauffer-Flint Hall, 1435 Jayhawk Blvd., Room 203A
Lawrence, KS 66045-7575

Graduate Degree Requirements:
News/Information and Strategic Communications—Lawrence Campus

To earn the degree, a student must complete 36 graduate credit hours with at least a B (3.0) average. A student without professional experience or an undergraduate degree in journalism and mass communications from an accredited program also must complete undergraduate basic skills courses. A student must elect to complete a thesis or project. Each student must pass a general examination.

Major Components of 36-hour Requirement. A student entering the program must have basic journalism skills. The requirement may be fulfilled by professional experience or undergraduate course work. In addition, a student takes 12 hours of core courses, 15 hours of professional courses, and 9 hours of advanced courses, including a master’s project or thesis.

Basic Skills Requirements. Students may meet the basic skills requirement with significant professional experience or an undergraduate degree in journalism and mass communications from a school accredited by the Accrediting Council on Education in Journalism and Mass Communications. A student who does not meet the requirement must complete two undergraduate courses that do not count toward the 36-hour graduate credit requirement:

JOUR 419 Multimedia Editing (3)
JOUR 445 Multimedia Writing and Production (3)

Core Course Requirements. The core graduate courses help students develop strong research and critical-thinking skills. Four courses are required:

JOUR 618 First Amendment and Society .................................................. 3
JOUR 801 Research I: Theory ................................................................. 3
JOUR 802 Research II: Methods .............................................................. 3
JOUR 803 Survey of Mass Media and Popular Culture ........................... 3

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Professional Course Requirements. Those who hold the master’s degree from KU are expected to be able to perform professional tasks. Students therefore must complete a minimum of 15 credit hours of professionally oriented courses.

A student with significant professional experience may, as part of the application, request permission to substitute other course work for all or part of the professional course requirement. The application must include documentation of the student’s professional experience. At the point of admission, the graduate committee grants or denies requests to substitute other course work for the professional course requirement.

A student takes professional courses from among courses numbered JOUR 500 to JOUR 797, excluding JOUR 618 First Amendment and Society. These courses must include one course designated as advanced media or JOUR 676 Strategic Campaigns.

Up to 6 credit hours of professional courses may be completed outside the school, with the approval of the graduate committee.

Advanced Course Requirements. A student must complete 9 credit hours of advanced course work:

- JOUR 840 Seminar in: ........................................... 3
- JOUR 898 Master’s Research ........................................... 3
- JOUR 899 Master’s Project/Thesis ........................................... 3

General Examination. Each student must pass an oral or a written general examination in the semester before enrolling in JOUR 899 Master’s Project/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 or project. A student completing a thesis or project must be continuously enrolled, excluding summer session, until the thesis or project has been completed and approved. A maximum of 3 credit hours of JOUR 899 may be applied toward the 36 credit hours required for graduation. A student must complete the master’s degree program within seven years of admission.

Joint M.S.J./J.D. Degree

The joint M.S.J. and J.D. degree program combines into approximately three and one-half years of full-time study the Master of Science in journalism and the Juris Doctor programs offered by the School of Journalism and Mass Communications and the KU School of Law. The joint degree program offers students academic grounding in both disciplines to prepare them for the professional practice of journalism, law, or media law.

For more information, please contact the University of Kansas, David D. Perlmutter, Associate Dean for Graduate Studies and Research, William Allen White School of Journalism and Mass Communications, Stauffer-Flint Hall, 1435 Jayhawk Blvd., Lawrence, KS 66045-7575, ddp@ku.edu, www.journalism.ku.edu.

You may also contact the University of Kansas, School of Law, Green Hall, 1535 West 15th St., Room 205, Lawrence, KS 66045-7577, (785) 864-4378, admitlaw@ku.edu, www.law.ku.edu.

Graduate Degree Requirements: Marketing Communications—Edwards Campus

The University of Kansas Edwards Campus
12600 Quivira Rd., Overland Park, KS 66213-2402
www.journalism.ku.edu, (913) 897-8416

Course Requirements
A student must complete 36 hours of credit with at least a B (3.0) average. A student takes 6 hours of core courses, 21 hours of professional courses, and 9 hours of advanced courses, including a master’s project or thesis. A student must complete the master’s degree program within seven years of admission.

Core Course Requirements (9 credit hours).
- JOUR 820 Marketing Fundamentals for Communicators ........................................... 3
- JOUR 828 Financial Fundamentals for Communicators ........................................... 3
- JOUR 829 Marketing Communications Research ........................................... 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 21 credit hours of professionally oriented courses, of which a minimum of 6 hours must be taken in each of three areas. The areas are:

- Management (minimum of 6 hours)
  - JOUR 822 Database Development and Management ........................................... 3
  - JOUR 826 Innovation in Management of Communications .................................... 3

- Marketing (minimum of 6 hours)
  - JOUR 821 Integrated Marketing Communications and Sales Strategies .................. 3
  - JOUR 823 Branding in Marketing Communications ........................................... 3
  - JOUR 825 Relationship Marketing ................................................................. 3

- Development (minimum of 6 hours)
  - JOUR 819 Writing for Marketing Communications ........................................... 3
  - JOUR 824 Creative Process ............................................................................. 3
  - JOUR 827 Marketing Ethics ............................................................................ 3

Advanced Course Requirements. A student must complete 9 credit hours of advanced course work:

- JOUR 840 Seminar in: ........................................... 3
- JOUR 898 Master’s Research ........................................... 3
- JOUR 899 Master’s Project/Thesis ........................................... 3

General Examination. Each student must pass an oral or a written general examination in the semester before enrolling in JOUR 899 Master’s Project/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 or project. A student completing a thesis or project must be continuously enrolled, excluding summer session, until the thesis or project has been completed and approved. A maximum of 3 credit hours of JOUR 899 may be applied toward the 36 credit hours required for graduation.

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.

See pages 12-14 for admission procedures.

Application fees: Domestic students in journalism: paper $55, online $45.
International students in journalism: paper $60, online $55.

The journalism graduate program emphasizes professional preparation and the ability to think critically and to perform in converged media.
JOUR 500 Topics in Journalism (1-3).
JOUR 502 International Journalism (3).
JOUR 503 History of Journalism and Mass Communication (3).
JOUR 505 Professional Development (1).
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 in Media (3).
JOUR 536 Documentary and Corporate Video (3).
JOUR 537 Case Studies in Editing (3).
JOUR 538 International Marketing Communications (3).
JOUR 540 Sports, Media, and Society (3).
JOUR 542 Magazine Publishing (3).
JOUR 552 Print and Online Design (3).
JOUR 553 Marketing Communication Production and Design (3).
JOUR 558 E-Commerce and the Media (3).
JOUR 562 Publication Design and Production (3).
JOUR 568 Marketing and Media Research (3).
JOUR 572 Sales Strategy (3).
JOUR 574 Financial Basics for Communicators (3).
JOUR 600 School Journalism and Publications (3).
JOUR 608 Ethics and the Media (3).
JOUR 610 Advanced Photojournalism (3).
JOUR 618 First Amendment and Society (3).
JOUR 626 Long-form Writing (3).
JOUR 636 Opinion and Commentary—Advanced Media (3).
JOUR 646 Depth Reporting—Advanced Media (3).
JOUR 667 Fieldwork in Magazines—Advanced Media (3).
JOUR 676 Strategic Campaigns (4).
JOUR 680 Multimedia Management and Leadership (3).
JOUR 691 Community Journalism—Advanced Media (3).
JOUR 692 TV News I—Advanced Media (3).
JOUR 693 TV News II—Advanced Media (3).
JOUR 694 Online Writing, Design, and Production—Advanced Media (3).
JOUR 695 Newspaper Reporting—Advanced Media (3).
JOUR 696 Newspaper and Online Editing—Advanced Media (3).
JOUR 697 Magazine Writing—Advanced Media (3).
JOUR 698 Media Sales (3).
JOUR 699 Reporting and Editing for Print and Online—Advanced Media (3).
JOUR 795 Current Issues in Marketing Communications (3). Classes are designed to address current issues in marketing communications and are open to non-degree and other graduate students. LEC.
JOUR 796 Skill Development in Marketing Communications (3). Classes are designed to develop skills used in marketing communications and are open to non-degree and other graduate students. LEC.
JOUR 797 Special Topics in Marketing Communications (3). A student may complete a special project addressing a current issue in marketing communications. Departmental permission is required. LEC.
JOUR 801 Research I: Theory (3). A comprehensive review of the theoretical and philosophical underpinnings of media research and practices. This seminar offers a range of perspectives and covers various interpretive, critical, 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 803 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. Prerequisite: JOUR 802. LEC.
JOUR 815 Investigation and Conference (1-3). Specialized work by qualified students under direction of the graduate faculty. Investigation and research studies. Prerequisite: Ten hours of graduate work in journalism. RSH.
JOUR 819 Writing for Marketing Communications (3). A writing-intensive course focusing on articles and other works about marketing communications, management, general business and related subjects. Students read and discuss a core of designated work as well as works they select on their own. Students write reports, executive summaries and analytical briefings in which they synthesize these readings and other research into marketing and management concepts to their own written works. LEC.
JOUR 820 Marketing Fundamentals for Communicators (3). The course is designed to provide a fundamental understanding of marketing theory and process and how these theories relate to Integrated Marketing Communications. Specific focus will be spent on the marketing environment, the marketing mix, market segmentation, planning, execution and measurement. As part of the class, students will learn the components of a marketing plan and how to develop a plan based on specific quantifiable corporate objectives. LEC.
JOUR 821 Integrated Marketing Communications and Sales Strategies (3). The concept of integrated selling strategies and how these strategies logically lead to execution in various forms of message delivery systems. Through case studies of specific business cases, students develop insights into potential buyer segments and develop rationales for the most effective way to reach those segments. LEC.
JOUR 822 Database Development and Management (3). A course in creating, updating, and effectively using databases in marketing communications. Students learn the process of designing a database, what information to include and how to acquire information, and how to organize and execute marketing communications programs using a database. LEC.
JOUR 823 Branding in Marketing Communications (3). Cases and topics in the development and execution of branding in marketing communications plans. The course emphasizes how organizations define actual brand problems and attempt to solve them. LEC.
JOUR 824 Creative Process (3). An examination of the creative process and techniques of creative problem solving. The course gives students numerous opportunities to solve a variety of marketing communications problems. Students have an opportunity to visit with individuals who practice creativity in their professional lives and individuals who study creativity as a science. LEC.
JOUR 825 Relationship Marketing (3). An exploration of the principles of relationship marketing and their application to marketing communications. Special emphasis is on the development of relationship messages, the use of databases for customer management, and a review of appropriate marketing communications media. Prerequisite: JOUR 820, JOUR 821, JOUR 822, and JOUR 823. LEC.
JOUR 826 Innovation in Management of Communications (3). Students shall demonstrate their knowledge of Innovation Theory through papers, presentations and an essay exam. The class will emphasize Management Innovation but will also cover marketing, process and product innovation. Students will show their ability to keep up with current events and trends in management through weekly assignments. Prerequisite: JOUR 820, JOUR 821, JOUR 822, and JOUR 823. 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. LEC.
JOUR 828 Financial Fundamentals for Communicators (3). This course covers a wide range of financial-related concepts from the perspective of the communications function. Topics include: financial markets; finding and using key Securities and Exchange Commission filings; understanding the balance sheet, income statement and cash flows; financial analysis; investor relations; impact of Sarbanes-Oxley; corporate governance; building and implementing financial systems for for-profits. Prerequisite: JOUR 820, JOUR 821, JOUR 822, and JOUR 823. LEC.
JOUR 829 Marketing Communications Research (3). Students learn how marketing and media research helps build and evaluate an organization’s marketing and strategic communications plans. Students study and conduct secondary and primary research including focus groups, ethnography and surveys. Emphasis throughout the course is on the management of the research process and its relationship to marketing decision-making. Prerequisite: 27 hours of required Marketing Communications course work. LEC.
JOUR 829 Research, Metrics, and Measurement (3). Application of the research, metrics, and measurement tools commonly used by corporations or organizations to evaluate performance. The class focuses on working with a specific client organization in preparation for completing the marketing communications project. Prerequisite: 27 hours of required Marketing Communications course work. 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. LEC.
JOUR 898 Master's Research (3). The student, with the guidance of a master’s project/thesis committee begins the research. Project are intended for a professional audience or professional media or clients and represent professional practice or performance. The thesis is intended for an academic audience, part of which might be submission to a scholarly conference or journal. Prerequisite: Satisfactory completion of 18 hours of graduate course work. RSH.
JOUR 998 Master's Project/Thesis (3). The student, with the guidance of a master's project/thesis committee completes execution of the project or thesis. In addition, the student completes the final, general examination and the presentation/defense of the project or thesis. Prerequisite: Satisfactory completion of JOUR 896, Master's Research. RSH.
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See pages 12-14 for admission procedures.

Application fees: Domestic students in liberal arts and sciences: paper $55, online $45.
International students in liberal arts and sciences: paper $60, online $55.
The College of Liberal Arts and Sciences offers graduate programs in 42 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 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. Students seeking certificates or participating in workshops 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.
- 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 are:

- Graduate application, online at www.clas.ku.edu/GAPC
- Original transcript(s) of all college work (must show conferred 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 or who are enrolled only in certificate programs or 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 student receives 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. See Admission in the General Information chapter of this catalog.

To be admitted, a student must have a baccalaureate degree from an accredited institution, or the equivalent thereof from a university abroad. Requests for exemption from this regulation must be forwarded with departmental endorsement to the dean of Graduate Studies.

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 specified in the letter of admission. Generally, earning a grade-point average of 3.0 in the first semester of enrollment is sufficient to achieve good standing. In some cases, passing certain required courses with a minimum grade or meeting specific competencies by a set time also may be required.

Deadline Dates for the Issuance of I-20’s to International Students Still in Their Home Countries. Completed international applications (admitted by the department with complete financial and English information) are processed and the appropriate visa form (I-20 or IAP-66) is sent to students if applications are received by:

- November 15—any spring semester
- April 15—any summer session
- June 15—any fall semester

Students whose applications are received after these dates are granted admission for the following semester. Exceptions are handled individually.

Enrollment (Degree, Nondegree, Certificate)

Nine credit hours in fall or spring semester and 6 hours in summer session constitute full-time enrollment in graduate study. Maximum enrollment for graduate students, except in rare instances, is 16 hours in fall or spring semester and 9 hours in summer session. A graduate student’s enrollment must reflect that fact.

Certificate students may have different course-load requirements. Check with an appropriate adviser.

Generally, no student is accepted and allowed to enroll after the first four weeks of a semester or the first two weeks of a summer session.

Dual Enrollments. Students enrolled in two schools or working on two degrees at the same time must complete the work for both degrees. No courses count toward both degrees, except in the Joint degree programs that have been established (e.g., M.P.A./J.D., M.A. Econ./J.D., M.B.A./M.A. in Area Studies, etc.). See also Master’s Degrees, Combined Master’s Degrees in the General Information chapter of this catalog.

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. 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; if the grade-point average falls below 3.0, the department is notified that the student should be placed on probation. This action is followed by a letter to the student confirming the probation and explaining the student’s options.

Usually a student is placed on probation for one academic semester. If the cumulative grade-point average has not risen to 3.0 at this point, the student can either be dismissed or allowed to continue on probation, depending on the department’s decision. If a student has a dangerously low grade-point average and is in jeopardy of never graduating, the department must write a letter explaining why the student should be allowed to continue.

A graduate student can be dismissed upon recommendation of the student’s department. Academic dismissal should occur before a 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. 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 petition. 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 unless it is the semester during which the student will graduate, in which case enrollment is required. 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 completion of a master’s degree—electronically submitted thesis, signed title and acceptance pages, results of the final oral examination, etc.—must be received by the end of the first two weeks of a semester or the first week of summer session if the student does not plan to enroll.

Final Examination. A final general examination in the major subject is required. The examination is held during the semester of the student’s final enrollment in course work and, in 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. Students earning a master’s thesis degree must have completed at least 1 hour of thesis enrollment before the master’s degree can be awarded. See also Master’s Degree Requirements, M.A. and M.S. Degrees in the General Information chapter of this catalog.

Thesis. General rules for the preparation of a thesis are available online at www.graduate.ku.edu/~etd.

Readmission after Five Years’ Absence. Students who have been absent from the university for more than five years must apply for readmission. 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 advisor 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 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 on the appropriate form. The skill should be described in words; a list of course numbers or titles is not acceptable. The research skill must be completed before the oral comprehensive examination can be taken.

Residency Requirement. The doctoral residency requirement should be fulfilled before the comprehensive oral examination is scheduled.

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 Degree Requirements of the College.
of Philosophy in the General Information chapter. The student must take the Oral Comprehensive Examination for the Ph.D. degree before the first day of finals if the hours in which the student is enrolled at the time are to count toward the 18 post-comprehensive enrollment hours described under Doctoral Degree Requirements, Doctor of Philosophy, Candidacy in the General Information chapter. It may be necessary for a student to revalidate or retake the oral comprehensive if he or she took the examination more than five years before an extension of time request.

Dissertation. Rules for preparing the final copies of the dissertation are available online at www.graduatedu.edu/~edit. All materials relative to the completion of a doctoral degree—electronic submissions, dissertation, signed title and acceptance pages, results of the final oral examination, etc.—must be received by the end of the first two weeks of a semester or the first week of summer session, if the student does not plan to enroll in dissertation hours.

Maximum Time Allowed for Submitting the Thesis or Dissertation. A period of six months from defense of the thesis or dissertation is allowed for students to make revisions and to submit the final version. 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

Kansas African Studies Center
Director: Garth A. Myers, kasc@ku.edu
Associate Director: Khalid El-Hassan, (785) 864-1064
Bailey Hall, 1440 Jayhawk Blvd., Room 10
Lawrence, KS 66045-7574
www.kasc.ku.edu, (785) 864-3745, fax: (785) 864-5330

The Kansas African Studies Center is a comprehensive National Resource Center funded by Title VI of the U.S. Higher Education Act for the study of Africa. It coordinates and develops the interdisciplinary interests of Africanists at KU and promotes the study and understanding of Africa in the university, the state, and the region. It sponsors research, enhances curriculum, 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
Interim Director: Marsha Haufler
Bailey Hall, 1440 Jayhawk Blvd., Room 210
Lawrence, KS 66045-7574
www.coas.ku.edu, (785) 864-3849, fax (785) 864-5034

The Center for East Asian Studies is a National Resource Center funded by the U.S. 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, Korean, and Uyghur; 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, www2.ku.edu/~ces, (785) 864-9070

The Center for European Studies facilitates the interdisciplinary study of Western Europe through teaching, scholarship, study abroad, and international exchanges. It promotes a better understanding of European-American relations and the impact of European integration on EU member states and their European partners and a deeper appreciation of the societies and peoples of this area. More than 80 faculty members who specialize in some aspect of European studies—including European history, architecture, French and Italian literatures and cultures, art history, Germanic languages and literatures, legal history and comparative law, Spanish and Portuguese languages and literatures, international relations, political science, and international business—contribute to programs, research, conference series, outreach, and exchanges dealing with the European community.

Center of Latin American Studies
Director: Elizabeth Kuznesof
Bailey Hall, 1440 Jayhawk Blvd., Room 320
Lawrence, KS 66045-7574
www2.ku.edu/~latamst, (785) 864-4213, fax: (785) 864-3800

The Center of Latin American Studies is a nationally recognized center for the study of Latin America. It promotes interdisciplinary study of Latin America and its languages through teaching, scholarship, outreach, study abroad, and international exchanges. It administers bachelor’s and master’s degree programs and graduate certificate programs in Central American and Mexican Studies and Brazilian Studies. Areas of particular strength are Central America, Mexico, Brazil, and Paraguay. Languages include Spanish, Portuguese, Kachiquel Maya, Quichua, and Haitian Creole. The center coordinates Latin American events on campus including lectures, films, exhibits, and theatrical performances. Exchanges and study abroad programs have been developed in Costa Rica, Mexico, Peru, and Brazil. The center offers outreach to schools, businesses, and the community and serves as a resource for the state, the region, and the nation.

Center for Russian, East European, and Eurasian Studies
Director: Erik Herron
Bailey Hall, 1440 Jayhawk Blvd., Room 320
Lawrence, KS 66045-7574
www.crees.ku.edu, (785) 864-4236, fax: (785) 864-3800

The Center for Russian, East European, and Eurasian Studies is one of 16 comprehensive National Resource Centers funded by Title VI of the U.S. Higher Education Act for the study of Russia, Ukraine, 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.
African and African-American Studies Courses

AAAS 501 Regional History: _____ (3).
AAAS 502 Directed Language Study: _____ (5).
AAAS 503 Directed Language Study: _____ (3).
AAAS 504 Directed Language Study I: _____ (3).
AAAS 505 Directed Language Study II: _____ (3).
AAAS 510 Comparative Racial and Ethnic Relations (3).
AAAS 511 The Civil Rights Movement (3).
AAAS 512 African and Western Cosmologies (3).
AAAS 525 Social History of Black Aging in America (3).
AAAS 527 Popular Culture in Africa (3).
AAAS 532 Studies in Islam (3).
AAAS 534 The Rhetoric of Black Americans (3).
AAAS 542 The History of Islam in Africa (3).
AAAS 543 Language and Culture in Arabic-speaking Communities (3).
AAAS 545 Unveiling the Veil (3).
AAAS 550 Senior Seminar in: _____ (3).
AAAS 551 Environmental Issues in Africa (3).
AAAS 552 Classical Islamic Literature (3).
AAAS 553 Geography of African Development (3).
AAAS 554 Contemporary Health Issues in Africa (3).
AAAS 555 African Film and Video (3).
AAAS 557 Cities and Development (3).
AAAS 560 Race, Gender, and Post-colonial Discourses (3).
AAAS 574 Slavery in the New World (3).
AAAS 578 Central African Art (3).
AAAS 584 Black American Literature (3).
AAAS 585 Race and the American Theatre (3).
AAAS 590 The Rise and Fall of Apartheid (3).
AAAS 598 Sexuality and Gender in African History (3).
AAAS 600 Politics in Africa (3).
AAAS 602 U.S. Policy—Post-colonial World (3).
AAAS 650 Sufism (3).
AAAS 657 Gender in Islam and Society (3).
AAAS 676 West African Art (3).
AAAS 677 African Design (3).
AAAS 679 African Expressive Culture: _____ (3).
AAAS 680 Introduction to Modern Africa (3).
AAAS 690 Investigation and Conference (1-3).
AAAS 695 Honors Project in: _____ (3).
AAAS 700 Africa in World Politics (3). A 20th-century study of the combined internal and external forces that precipitated the rise of Africa, the major African issues in international relations, and Africa's impact on the modern world. LEC
AAAS 715 Seminar in African Art (3). A concentrated study of a special topic relating to African Art studies. Different topics are offered in different semesters. (Same as HA 715.) Prerequisite: Nine hours of Art History and/or consent of instructor. LEC
AAAS 774 Topics in Literature of Africa and the African Diaspora: _____ (3). An intensive study of the literatures of Africa and/or African diaspora (people of African descent dispersed around the world). This study will focus on the major characteristics of a particular period, gender, 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 ENGL 774.) LEC

■ 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: Cheryl Lester, chlester@ku.edu, (785) 864-2309
Graduate Director: Ann Schofield, schofield@ku.edu, (785) 864-2304
Bailey Hall, 1440 Jayhawk Blvd., Room 213
Lawrence, KS 66045-7574, www2.ku.edu/~amerst, (785) 864-4011
Professors: Katzman, Schofield, Tuttle
Professor Emeritus: Yetman
Associate Professors: Lester, Tucker
Assistant Professors: Anderson, Flores, Golash-Boza, Hart

American studies is an interdisciplinary program offering graduate work on society and culture in the United States—past, present, and in global context. It accommodates a variety of individual academic objectives. All students are asked to define a concentration—a period or problem—and to draw on appropriate university resources relating to that area. Students must demonstrate coherence in their graduate work and be able to show relationships between their concentrations and the wider sociocultural system. To accomplish this, students must develop knowledge (including historical perspective) in the humanities and social sciences.

American studies students concentrate on broad subject areas, such as race and ethnicity, gender, popular culture, religion, labor and work, political life, art, music, architecture, family life, Great Plains culture, urban life, or social and cultural theory.

Permanent exhibits are open in KU's Natural History Museum and in Spencer Museum of Art.
Admission
Admission is based primarily on the applicant’s undergraduate or graduate record or both, references from persons familiar with the applicant’s work, and a statement of academic objectives prepared by the applicant. Completion of a bachelor’s degree is required of all applicants. Students should have taken a substantial amount of work in American studies or in a related field (e.g., American history, literature, art, sociology, anthropology, economics, political science, psychology, journalism). Prospective students must take the Graduate Record Examination and have the results forwarded to the Graduate Application Processing Center. Submit your application online at www.graduate.ku.edu/GAPC. Send transcripts of all completed college and university coursework to:

The University of Kansas
Graduate Application Processing Center
Strong Hall, 1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

Send all other requested application materials to:

The University of Kansas
American Studies Program, Graduate Applications
Bailey, Hall, 1440 Jayhawk Blvd., Room 213
Lawrence, KS 66045-7574

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 Planning and the normal one-year M.A. degree in American studies offered through the College of Liberal Arts and Sciences. It is designed for students interested in careers in policy planning and research involving the arts, social planning, cultural activities and facilities, and historic preservation. For more information on the combined program, consult the respective program chairs.

See also Urban Planning in the School of Architecture and Urban Planning chapter of this catalog.

American Studies Track, 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 general requirements, a Ph.D. candidate must complete a program of core and elective courses and demonstrate historical depth in the chosen emphasis. Candidates must select a concentration related to one of (or a combination of) several broad subject areas, such as race and ethnicity, gender, popular culture, religion, labor and work, political life, art, music, architecture, family life, Great Plains culture, urban life, or social and cultural theory. A minimum of 24 credit hours of course work and 18 credit hours of dissertation is required beyond the master’s degree.

Comprehensive Examination. Candidates take the comprehensive examination after completing their doctoral course work and satisfying the research skills requirement. The comprehensive examination has written and oral components. The written examination takes the form of a paper that coherently defines the content and parameters of the student’s academic concentration, including a discussion of the state of the art in the broad area of scholarship in which the concentration falls: the major research and scholarly controversies in the area; the principal theoretical, conceptual, and methodological approaches informing it; and the direction the area is taking. After a student’s written examination paper has been accepted by his or her examining committee, she or he may take the oral comprehensive examination, which focuses upon, but is not limited to, the issues raised in the written examination paper.

Research Skills. The department accepts reading knowledge in any two languages that would be of professional use to the student, or fluency (excellent reading and conversational abilities) in any one language of professional use, or reading knowledge in one language and proficiency in a research skill, or proficiency in two research skills relevant to the graduate program (e.g., statistics or a computer language).

Dissertation. An interdisciplinary dissertation is required. The department has established a detailed description of the procedures for completing a dissertation. The student’s dissertation committee is composed of at least three faculty members, who initially review and approve the student’s research proposal and direct the research to its completion.

Final Examination. All students must pass a final oral defense of the dissertation.

Handbook for Graduate Students
The department has prepared a handbook that summarizes procedures that a graduate student follows in working toward any one of the three graduate degrees. It contains a summary of regulations, departmental procedures, and the rationale behind these regulations. The handbook is available online at www2.ku.edu/~amerst.

American Studies Courses
AM 510 History of American Women—Colonial Times to 1870 (3).
AM 511 History of American Women: 1870 to Present (3).
AM 512 History of Women and Work in Comparative Perspective (3).
AM 520 Topics in Latino Studies: _____ (3).
AM 522 American Racial and Ethnic Relations (3).
AM 529 Race and the American Theatre (3).
AM 534 Comparative Racial and Ethnic Relations (3).
AM 536 Ethnicity in the United States: _____ (3).
AM 550 Introduction to Current Issues and Research in American Studies (3).
AM 551 Research Project in American Studies (3).
AM 552 Public Service in American Studies (3).
AM 553 Honors in American Studies (3).
AM 576 Cultural Geography of the United States (3).
AM 579 Geography of American Foodways (3).
AM 580 American Art (3).
AM 629 Sociology of Sport (3).
AM 650 Jazz and American Culture (3).
AM 677 The American Novel in the 19th Century (3).
AM 678 The Modern American Novel (3).
AM 694 Directed Readings (1-4).
AM 700 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 BIOL 787, GEOL 781, HIST 723, and MUSE 706.) 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 the changing practices regarding conservation techniques. Emphasis will be placed on detection and identification of causes of deterioration in objects made of organic and inorganic materials, and how these problems can be remedied. Storage and care of objects will also be considered. (Same as BIOL 787, GEOL 781, HIST 722 and MUSE 707.) 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 BIOL 788, GEOL 782, HIST 720, and MUSE 702.) Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC

AMS 725 Museum Studies Workshop: Museum Studies (1-3). Short term, intensive workshops to develop background in a variety of skills required in historical archives or museums. FLD

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 BIOL 798, 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 BIOL 785, GEOL 783, HIST 728, and MUSE 701.) Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC

AMS 737 Music in America (5). A survey of historical developments from the Pilgrim era to the present. (Same as MUSC 759.) Prerequisite: One course in the field of music history and literature or consent of instructor. LEC

AMS 767 Gerontology Proseminar (3). A proseminar coordinated by the Gerontology Center. The proseminar explores essential areas of gerontology for researchers and practitioners, providing a multidisciplinary (psychology, biology, sociology, and communication) perspective on aging. The proseminar surveys contemporary basic and applied research, service programs, and policy and management issues in gerontology. (Same as ABSC 787, COMS 787, PSYC 785, and SOC 767.) (Formerly HDPL 787.) LEC

AMS 787 Field Work (1-12). Supervised field research in aspects of American civilization. Prerequisite Consent of instructor. FLD

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 working with various programs and developing model programs. (Same as BIOL 784, GEOL 784, HIST 721, and MUSE 705.) Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC

AMS 799 American Studies Museum Apprenticeship (1-6). Provides directed, practical experience in research, collection care and management, public education, and exhibits with emphasis to suit the particular requirements of each student. (Same as ANTH 799, BIOL 797, GEOL 723, HIST 799, and MUSE 799.) FLD

AMS 801 Professional Practice in American Studies (1-3). Professional Practice in American Studies through an examination of some of the classic and innovative works, issues, debates, and controversies in the history and 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, logic, and procedures involved in various approaches to understanding American society and culture. LEC

AMS 804 Research Seminar (3). An intensive application of theoretical and methodological issues to the development of specific substantive research problems. Students will be expected to design and implement a study that will be critically assessed in the seminar. FLD

AMS 805 American Pluralism: Race, Ethnicity, and Religion in American Life (3). Analysis of the dynamics of intercultural and intergroup relations in America with special emphasis on the examination of major conceptual perspectives that have characterized the study of race, ethnicity, and religion in American life. LEC

AMS 808 Studies in: American Historical Experience in Different Semesters (3). Interdisciplinary study of different aspects of the American experience in different semesters. LEC

AMS 835 Colloquium in the History of Gender (3). This colloquium will cover theoretical and topical readings on the history of manhood, womanhood, and gender systems. (Same as HIST 895 and WS 835.) LEC

AMS 836 Colloquium in United States Women's History (3). This colloquium will cover theoretical and topical readings on the history of women in the United States from the pre-contact period to the present. It is designed to familiarize students with the most important and current historiography in the field. (Same as HIST 896 and WS 836.) LEC

AMS 837 Comparative Colloquium in Women's History (3). This colloquium will approach the history of women from a comparative perspective through theoretical and topical readings on women in at least two different cultures. (Same as HIST 897 and WS 837.) LEC

AMS 896 Examination Preparation (1-6). Directed and independent study in preparation for the M.A. examination. May be repeated. RSH

AMS 899 Thesis (1-6). Investigation of a topic for master’s thesis. Total enrollment in this course may not exceed six hours of credit. THE

AMS 900 Teaching Seminar (1-6). This seminar is designed to assist students in the preparation, presentation, and evaluation of teaching in American Studies. LEC

AMS 973 Seminar in United States Women's History (3). This research seminar will focus on the history of women in the United States from the pre-contact period to the present. Students will research and write a paper using primary sources, and present those papers to the seminar for evaluation. (Same as HIST 973 and WS 873.) LEC

AMS 996 Examination Preparation (1-9). Directed and independent study in preparation for the doctoral comprehensive examinations. May be repeated. RSH

AMS 998 Seminar in: _____ (1-6). Directed and independent study in preparation for the doctoral comprehensive examinations. May be repeated. RSH

AMS 999 Dissertation (1-12). THE

Anthropology

Chair: Jim Miekle, miekle@ku.edu

Graduate Adviser: Jack Hofman, hofman@ku.edu

Fraser Hall, 1415 Jayhawk Blvd., Room 622

Lawrence, KS 66045-7556

www2.ku.edu/~kuantl, (785) 864-4103, fax: (785) 864-5224

Professors: Crawford, Frayer, Hanson, Janzen, Mielke, Moos, Stull

Professors Emeriti: Johnson, Montet-White, Smith, Squier, Yamamoto

Associate Professors: Dean, Gibson, Gray, Hofman, Hoopes, Mandel, Radovanovic

Assistant Professors: Dwyer, Hannoun, Metz, Redd

The graduate program consists of 18 faculty members and about 70 students, giving a professor-student ratio of about one to four and allowing a great deal of direct interaction between faculty and students. The department awards M.A. and Ph.D. degrees and has successfully placed most of its Ph.D. graduates in professional positions.

The department offers graduate training in archaeology, biological anthropology, linguistic anthropology, and social/cultural anthropology. It has expertise in applied anthropology, anthropological genetics, molecular genetics, evolutionary studies, language contact and endangerment, medical anthropology, Native American linguistics, paleoanthropology, symbolic anthropology, visual anthropology, New World and European prehistory, and geoarchaeology. Geographic strengths include Asia, Europe, Latin America, Native North America, the Pacific, Sub-Saharan Africa,
and contemporary United States. The department is closely associated with the Laboratory of Biological Anthropology.

**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 student with a master’s degree in anthropology from another institution may apply directly to the Ph.D. program.

Submit your application online at [www.graduate.ku.edu/GAPC](http://www.graduate.ku.edu/GAPC). Send transcripts of all completed college and university course work to

**The University of Kansas**
Graduate Application Processing Center
Strong Hall, 1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

Send all other requested application materials to

**The University of Kansas**
Department of Anthropology
Fraser Hall, 1415 Jayhawk Blvd., Room 622
Lawrence, KS 66045-7556

**M.A. Degree Requirements**

The M.A. program is a general curriculum for students who wish to enter the Ph.D. program in anthropology or who plan to pursue graduate studies only to the M.A. level. Formal requirements for the M.A. include (1) completion of 30 credit hours of graduate work in anthropology and related disciplines, including ANTH 701, ANTH 702, ANTH 703, and ANTH 704; (2) completion of the subdiscipline requirements; (3) completion of the M.A. thesis; and (4) passing the final M.A. examination.

**Ph.D. Degree Requirements**

The Ph.D. in anthropology is awarded to candidates who have demonstrated specialized competence in one or more of the general fields and who have contributed to the body of knowledge and theory in the specialized field through independent, original research.

**Research Skills.** In the course of the graduate career, but before the comprehensive examinations, the Ph.D. aspirant must satisfy one of the following options:

1. Demonstrate a comprehensive reading and speaking knowledge of one foreign language relevant to the student’s research interests in which there exists a significant research literature in anthropology.
2. Demonstrate proficiency in the reading of two foreign languages relevant to the student’s research interests in which there exists significant research literature in anthropology.
3. Demonstrate proficiency in the reading of one foreign language relevant to the student’s research interests in which there exists a significant research literature in anthropology 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, or the student may propose to the committee a course of study by which he or she may acquire another research skill. Competence in a research skill is certified by a committee appointed by the department. Competence in a foreign language is tested and certified by authorized members of the appropriate department.

On completion of a Foreign Language or Other Research Skills requirement, the student should notify the graduate coordinator, who enters it in the student’s permanent record.

**Residency Requirement.** Two semesters, normally consecutive, or one semester and one summer session must be spent in residence at KU.

**Field Statements.** Students must become thoroughly familiar with the literature pertinent to their specializations and doctoral research problems. The student who submits field statements is asserting that he or she has achieved competence in limited areas defined by the subdiscipline, as demonstrated by bibliographies and written treatments of the research problems in those areas. The comprehensive examinations are based on the areas specified in the field statements.

**Written and Oral Comprehensive Examinations.** The student’s doctoral committee devises and judges the written comprehensive examinations, which may be taken either together or at different times. If the committee is satisfied with the caliber of the student’s field statements and written examinations, it may schedule the oral comprehensive examination, providing all other requirements have been fulfilled.

**Dissertation Proposal.** From the beginning of doctoral study, the student should plan to conduct a doctoral dissertation project. This is an independent piece of research, usually requiring fieldwork, and leading to a dissertation that contributes to anthropological knowledge.

**Defense of the Dissertation.** When the dissertation is accepted by the dissertation committee, a final oral examination is held.

**Handbook for Graduate Students**

Detailed information, application deadlines, and general information may be found in *The Graduate Program in Anthropology*, available on request from the department.

### Anthropology Courses

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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<td>ANTH 500</td>
<td>Topics in Archaeology</td>
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<td>ANTH 501</td>
<td>Topics in Sociocultural Anthropology</td>
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<td>ANTH 502</td>
<td>Topics in Anthropological Linguistics</td>
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<td>ANTH 503</td>
<td>Topics in Biological Anthropology</td>
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<td>ANTH 504</td>
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<td>ANTH 505</td>
<td>Prehistory of Eastern North America</td>
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<td>ANTH 506</td>
<td>Ancient American Civilizations: Mesoamerica</td>
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<td>ANTH 507</td>
<td>The Ancient Maya</td>
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<tr>
<td>ANTH 508</td>
<td>Ancient American Civilizations: The Central Andes</td>
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<tr>
<td>ANTH 510</td>
<td>An Introduction to Southwestern Archaeology</td>
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<td>ANTH 512</td>
<td>Ethnohistory</td>
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<td>ANTH 514</td>
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<td>ANTH 515</td>
<td>Topics in Old World Prehistory</td>
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<td>Hunters and Gatherers</td>
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<td>ANTH 517</td>
<td>Geoarchaeology</td>
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<td>Course Code</td>
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<tr>
<td>ANTH 518</td>
<td>Environment and Archaeology</td>
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<td>Archaeological Ceramics</td>
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<td>Demographic Anthropology</td>
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<td>ANTH 542</td>
<td>Biology of Human Nutrition</td>
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<td>Anthropology of Food and Nutrition</td>
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<td>Human Paleontology: Homo Erectus to Homo Sapiens</td>
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<td>Cultural Diversity in the United States</td>
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<td>ANTH 565</td>
<td>Popular Images in Japanese Culture, Literature, and Films</td>
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<td>ANTH 567</td>
<td>Japanese Ghosts and Demons</td>
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<td>ANTH 571</td>
<td>Violence, Aggression, and Terrorism in the Modern World</td>
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<td>ANTH 580</td>
<td>Feminism and Anthropology</td>
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<td>ANTH 586</td>
<td>Visual Anthropology</td>
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<td>ANTH 595</td>
<td>The Colonial Experience</td>
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<td>ANTH 603</td>
<td>Shamanism Past and Present</td>
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<td>ANTH 605</td>
<td>Mortuary Practices in the Archaeological Record</td>
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<td>Field Concepts and Methods in Geoarchaeology</td>
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<td>ANTH 648</td>
<td>Human Osteology</td>
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<td>ANTH 650</td>
<td>Human Reproduction: Biology and Behavior</td>
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<td>Population Genetics</td>
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<td>ANTH 661</td>
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<td>ANTH 662</td>
<td>Economic Anthropology</td>
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<td>ANTH 665</td>
<td>Women, Health, and Healing in Latin America</td>
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<td>ANTH 666</td>
<td>Anthropology of Religion</td>
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<td>ANTH 667</td>
<td>Primitive Mythology</td>
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<td>ANTH 670</td>
<td>Contemporary American Culture</td>
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<td>ANTH 672</td>
<td>Meat and Drink in America</td>
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<td>ANTH 674</td>
<td>Political Anthropology</td>
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<td>ANTH 675</td>
<td>Anthropology of Law</td>
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<td>ANTH 680</td>
<td>Culture and Human Biology</td>
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<td>ANTH 684</td>
<td>Anthropology and the Health Sciences</td>
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<td>ANTH 695</td>
<td>Cultural Ecology</td>
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<td>ANTH 696</td>
<td>Language, Culture, and Ethnicity in Prehistoric Eastern Europe</td>
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<td>ANTH 699</td>
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<td>Current Archaeology</td>
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<td>Technological Change</td>
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<td>ANTH 710</td>
<td>History of American Archaeology</td>
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<td>ANTH 715</td>
<td>Plains Archaeology</td>
<td>(2-4). Problems in the archaeology of the Great Plains region, with an emphasis on prehistoric developments. LEC</td>
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<td>ANTH 718</td>
<td>Seminar in Latin American Archaeology</td>
<td>(3).</td>
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<tr>
<td>ANTH 720</td>
<td>Seminar in Old World Prehistory</td>
<td>(2-4). Studies of prehistoric cultures and their natural environments. Topic for semester to be announced. Prerequisite: Consent of instructor. LEC</td>
</tr>
<tr>
<td>ANTH 730</td>
<td>Linguistics in Anthropology</td>
<td>(3). Study of language as it concerns anthropology. Language systems in relation to culture, language taxonomy, semiotics, and linguistic analysis as an ethnographic tool. (Same as LING 730.) Prerequisite: Consent of instructor. LEC</td>
</tr>
<tr>
<td>ANTH 740</td>
<td>Linguistic Data Processing</td>
<td>(3). The tools and techniques necessary to analyze linguistic fieldwork data, including research design, recording and elicitation techniques, computational data processing and analysis, and field ethics. Techniques include design of research field, data collection, and data analysis. Use of phonetic transcription, grammatical annotation, and analysis of language context. Practice of techniques via short studies of at least one language. (Same as LING 740.) Prerequisite: LING 705 or permission of instructor. LEC</td>
</tr>
<tr>
<td>ANTH 741</td>
<td>Field Methods in Linguistic Description</td>
<td>(3). The elicitation and analysis of phonological, grammatical, and discourse data from a language consultant. In-depth research on one language. Techniques of research design, methods of phonetic transcription, grammatical annotation, and analysis of language context. (Same as LING 741.) Prerequisite: LING 705 or permission of instructor. LEC</td>
</tr>
<tr>
<td>ANTH 742</td>
<td>Topics in Anthropology</td>
<td>(3). Introduction to the nature and distribution of North American Indian languages. Prerequisite: ANTH 306 or ANTH 430. LEC</td>
</tr>
<tr>
<td>ANTH 748</td>
<td>Language Contact</td>
<td>(3). Theories and case studies of languages in context. Anan and genetic linguistics, genesis of pidgins and creoles, multilingualism. Social, political, economic, and geographic factors in language change. (Same as LING 748.) Prerequisite: A course in linguistics. LEC</td>
</tr>
<tr>
<td>ANTH 749</td>
<td>Linguistics and Ethnolinguistics of China and Central Asia</td>
<td>(3). Seminar in linguistics and linguistic anthropology, focusing on dominant and/or minority languages of China, Central Asia, or a particular region of Central and Eastern Eurasia. Topics may include any subfield of linguistics, including language contact, typology, dialectology, and sociolinguistics. Topic for semester to be announced. (Same as LING 749.) Prerequisite: A course in linguistics. LEC</td>
</tr>
<tr>
<td>ANTH 750</td>
<td>Disease and Adaptation</td>
<td>(3). The role of disease in human evolution, variation, and adaptation is examined. Topics include paleopathology, epidemics, and genetic/cultural adaptation to certain diseases. Graduate version of ANTH 450 with more advanced requirements. Prerequisite: Graduate standing or consent of instructor. LEC</td>
</tr>
<tr>
<td>ANTH 754</td>
<td>Biological Bases of Human Behavior</td>
<td>(3). The role of behavioral genetics in normal behavior is examined in this seminar. There is special emphasis on the genetics of complex human behavior such as sensory perception, aggression, intelligence, proverbs, kinship, and learning. Several aberrations of behavior, such as schizophrenia, chromosomal aberrations, alcoholism, and brain dysfunction are discussed in terms of the genetic and environmental interactions. LEC</td>
</tr>
<tr>
<td>ANTH 756</td>
<td>Genetics of Isolates</td>
<td>(3). The evolutionary effects of finite population size and reproductive isolation are discussed in this seminar. Selection, stochastic processes, genetic distances, approaches to population structure, and measures of inbreeding are considered. Prerequisite: ANTH 652 or consent of instructor. LEC</td>
</tr>
<tr>
<td>ANTH 759</td>
<td>Dental Anthropology</td>
<td>(3). An intensive study of human teeth. Principles of eruption, growth, genetics, anatomy, pathologies, measurements, casting, and cultural changes in teeth will be presented. Prerequisite: Consent of instructor. LEC</td>
</tr>
<tr>
<td>ANTH 761</td>
<td>Introduction to Medical Anthropology</td>
<td>(3). 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, Western allopathic medicine, etc.) This course should be of special interest to premedical students and majors in the allied health professions. Graduate version of ANTH 461 with more advanced requirements. Prerequisite: Graduate standing or consent of instructor. LEC</td>
</tr>
<tr>
<td>ANTH 762</td>
<td>Human Growth and Development</td>
<td>(3). Consideration of comparative physical growth patterns throughout the human life cycle. Sex and population differences in skeletal, dental, and sexual maturation. Effect of genetic and environmental factors upon growth and development. LEC</td>
</tr>
<tr>
<td>ANTH 766</td>
<td>Topics in Biological Anthropology</td>
<td>(3). Topic for semester to be announced. Students may repeat the course for different topics. Prerequisite: Consent of instructor. LEC</td>
</tr>
<tr>
<td>ANTH 769</td>
<td>Seminar in Primate Studies</td>
<td>(3). Survey of field and laboratory investigations of the comparative anatomy and behavior of nonhuman primates. LEC</td>
</tr>
<tr>
<td>ANTH 770</td>
<td>Research Methods in Physical Anthropology</td>
<td>(3). A practical course in the use of special laboratory techniques of biological anthropological research and manipulation of data presentation. Prerequisite: Consent of instructor. LEC</td>
</tr>
<tr>
<td>ANTH 775</td>
<td>Seminar in Cultural Anthropology</td>
<td>(3). An introductory course in biological anthropology or consent of instructor. LEC</td>
</tr>
<tr>
<td>ANTH 776</td>
<td>Seminar in Applied Cultural Anthropology</td>
<td>(3). Selected problems in applied anthropological theory, methods, and findings in programs of directed change. LEC</td>
</tr>
<tr>
<td>ANTH 780</td>
<td>Social Organization</td>
<td>(3). Comparative analysis of the structure, development, and function of human social organization. Emphasis on prehistoric, Near Eastern, and political institutions. Prerequisite: Graduate standing or consent of instructor. LEC</td>
</tr>
<tr>
<td>ANTH 781</td>
<td>Symbolic Anthropology</td>
<td>(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</td>
</tr>
<tr>
<td>ANTH 783</td>
<td>Doing Ethnography</td>
<td>(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</td>
</tr>
</tbody>
</table>
ANTH 785 Topics in Ethnology: (1-8). Topic for semester to be announced. Usually the course will focus on selected problems in the social and cultural life of a people in a particular geographic region of the world. Coverage will include both the classical ethnological literature as well as special issues of current concern. Students may repeat the course for different topics. Prerequisite: Graduate standing or consent of instructor. LEC

ANTH 786 Ethnographic Documentary Production (3). This course combines classroom and fieldwork in applications of theories, ethics, and methods of visual representation. Students carry out team-based ethnographic fieldwork projects through which they learn about pre-production, video production, and nonlinear post-production. Prerequisite: Successful completion of ANTH 564 or permission of instructor. LEC

ANTH 788 Symbol Systems: (3). Anthropological approaches to the study of worldview, religion, folklore, mythology, art, and other expressive behavior. Topic for the semester to be announced. Prerequisite: Graduate standing 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. 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 of credit for the M.A. degree. (Same as AMS 799, BIEL 799, GEOG 723, HIST 799, and MUSE 799). FLD

ANTH 810 Seminar in Ethnolinguistics: (2-3). An advanced study of the relations between language and culture. Subject will vary each semester; students may repeat the course more than once. (Same as LING 810.) LEC

ANTH 851 Data Analysis in Archaeology: (3).Discussed methods and techniques 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 849 Seminar in Archaeology: (2-4). Subject matter of seminar to be announced for semester. LEC

ANTH 853 Theory and Current Problems in Archaeology (3). Consideration of scientific and methodological developments in archaeological systems, analytical procedures, application of multivariate statistics, and computer applications. Topic for semester to be announced. FLD

ANTH 855 Data Analysis in Archaeology: (1-6). A two-semester course designed to provide graduate students with basic principles in the analysis of archaeological data. Course content will include an introduction to archaeological systems, analytical procedures, application of multivariate statistics, and computer applications. Topic for semester to be announced. FLD

ANTH 857 Advanced Medical Anthropology: (3). An advanced study of the relationship of archaeology and anthropology and current theoretical and methodological trends in archaeology. LEC

ANTH 876 Advanced Medical Anthropology: (3). An advanced study of the relationship of archaeology and anthropology and current theoretical and methodological trends in archaeology. LEC

ANTH 899 Doctoral Dissertation (1-9). Individual investigation of special problems in anthropology. RSH

ANTH 996 Graduate Research (1-9). Individual investigation of special problems in anthropology. RSH

ANTH 999 Doctoral Dissertation (1-12). THE

Applied Behavioral Science

The KU Program in Human Development and Family Life

Chair: Edward K. Morris, abs@kum.edu

Graduate Director: Gregory J. Madden

Dole Human Development Center, 1000 Sunny Hil Ave., Room 4001 Lawrence, KS 66045-7555

www.abs.ku.edu, (785) 864-8440, fax: (785) 864-5202

Professors: Fawcett, Greenwood, Miller, Morris, Roberts, Semb, Sheldon, Sherman, Vernberg, Warren, White

Associate Professors: Jackson, Madden, Steele

Assistant Professors: Biggs, Dozier

The department's graduate program trains scientist-practitioners and researchers in the discovery and production, translation and application, and communication of knowledge in the behavioral sciences for understanding and solving problems of societal importance. For this, the department offers a Master of Arts (M.A.) in applied behavioral science and a Doctor of Philosophy (Ph.D.) in behavioral psychology. In both degree programs, the department requires (a) a sequence of courses that integrates the basic principles of behavior, experimental methods and research design, and conceptual foundations with (b) training in basic, applied, and intervention research. Among the areas of application are early childhood, education, developmental disabilities, adolescence, family enhancement, independent living, physical disabilities, and health promotion and community development. Other areas are described in the graduate application materials available from the department and on the Web site. Since its inception, the department has received notable grant funding for its research and training. In 2000, it received an award for Enduring Programmatic Contributions by the Society for the Advancement of Behavior Analysis.

Admission

Applicants seeking admission to the master's or doctoral program should contact the department for application forms, as well as for materials beyond those described here. Applications are submitted to the Graduate Application Processing Center, which records and forwards them to the department. Applicants submit a completed application form and one official transcript of all undergraduate and any graduate course work. They also may submit copies of relevant scholarly or professional work, published or unpublished. Reports of Graduate Record Examination scores are encouraged but not required.

Submit your application online at www.kum.edu/GRPC.

The University of Kansas

Graduate Application Processing Center

Strong Hall, 1450 Jayhawk Blvd., Room 313

Lawrence, KS 66045-7535

KU's Schiefelbusch Institute for Life Span Studies comprises 12 centers conducting more than 120 programs and projects that constitute basic and applied research, training, direct services, consultation, and technical assistance.

Each year, thousands of practitioners, families, and agencies benefit from the Life Span Institute's training and direct services.
Send all other requested application materials to
The University of Kansas
Department of Applied Behavioral Science, Dole Human Development Center, 1000 Sunnyside Ave., Room 4001
Lawrence, KS 66045-7555

Applicants also must obtain letters of recommendation from three professionals familiar with their academic, scholarly, or professional records. These are submitted directly to the department by the references, not by the applicants.

Among the department’s application materials is a list of the faculty members and descriptions of their research, scholarly, and professional interests. Applicants select at least three faculty members whose interests match their own. These faculty members constitute the applicant’s admissions committee; they review the application and supporting materials. An applicant is accepted when one of the faculty members consents to admit the student. This faculty member becomes the adviser of record and secures the signatures of three additional faculty members to serve on the student’s master’s or doctoral graduate committee.

For admission with full graduate standing, the department recommends that applicants complete 12 credit hours of undergraduate or graduate course work in behavior analysis, behavioral science, psychology, education, or related fields, and 6 hours in experimental methods, research design, or statistics. These hours may, however, be taken concurrently while enrolled in the department’s graduate programs.

Many faculty advisers offer research and teaching assistantships. Information about graduate scholarships is available online at www.rgs.ku.edu. Applicants should inform their prospective advisers if they apply for a scholarship.

For admission in the fall semester, the application and supporting materials should be received by January 15. Later applications will receive consideration in the order of their receipt. Students may be admitted for the spring semester through the application procedures described above, but there is no filing deadline.

M.A. in Applied Behavioral Science Degree Requirements

The master’s program trains highly competent scientist-practitioners in applied behavioral science. The program requires course work on the empirical and conceptual foundations of behavioral science and its research methods, but it emphasizes course work and supervised experience in behavioral assessment, analysis, intervention, and evaluation. Its objective is to advance empirically-based solutions to problems of societal importance.

Course Requirements. The M.A. degree requires 30 credit hours: 12 hours in four content areas and 3 hours in a practicum. Students must also conduct, write, and orally defend an empirically-based thesis. A course is required in each of the following areas:

1. Principles of Behavior 1 (3). The science of behavior (observation, experimentation, laboratory methods, basic behavioral principles (e.g., reinforcement, stimulus control), and their applications (e.g., early childhood, disabilities).

2. Research Methods I (3). Strategies and tactics of scientific research (objectivity, empiricism), the logic of experimentation (validity, reliability), measurement and direct observation, and experimental designs for single-subject and time-series analyses.

3. Conceptual Foundations I (3). The history and philosophy of behavioral science, contemporary advances in basic research for application, the analysis of everyday conduct (e.g., cognition, emotion), and current issues in the discipline and profession (e.g., relations between basic and applied research).

4. Applied Behavior Analysis I (3). The characteristics of applied behavioral research (assessment, analysis, intervention, evaluation), intervention research (clinical, community), applied procedures and programs, social validity, and ethical issues.

5. Research or Intervention Practicum I (3). A supervised practicum course in (a) basic or applied research or (b) behavioral interventions.

Courses in these areas also satisfy five of the course requirements and the thesis requirement in the doctoral program.

Ph.D. in Behavioral Psychology Degree Requirements

The doctoral program trains highly competent researchers in applied behavioral science (e.g., applied behavior analysis, applied psychology). Students are taught to discover and produce, translate and apply, and communicate knowledge in the behavioral sciences for understanding and solving problems of societal importance. The curriculum requires a sequence of instruction that integrates (a) courses in the basic principles of behavior, experimental methods and research design, and conceptual foundations with (b) training in basic, applied, and intervention research (e.g., assessment, analysis, intervention, evaluation).

The doctoral training program follows a junior-colleague model. Students work closely with their advisers and join them in every aspect of professional development. This includes designing and conducting research, preparing manuscripts for presentation and publication, and presenting and publishing those manuscripts. Students typically work with one adviser, but they may work with other faculty members or have co-advisers. If the student’s or adviser’s interests change over the course of training, students are free to seek another adviser.

Course Requirements. The doctoral degree program requires students to take one course in eight content areas, along with two practicum courses. The areas and the practicum courses are

1. Principles of Behavior 1 (3). The science of behavior (observation, experimentation, laboratory methods, basic behavioral principles (e.g., reinforcement, stimulus control), and their applications (e.g., early childhood, disabilities).

2. Research Methods I (3). Tactics and strategies of scientific research (objectivity, empiricism), the logic of experimentation (validity, reliability), measurement and direct observation, and experimental designs for single-subject and time-series analyses.

3. Conceptual Foundations I (3). The history and philosophy of behavioral science, contemporary advances in basic research for application, the analysis of everyday conduct (e.g., cognition, emotion), and current issues in the discipline and profession (e.g., relations between basic and applied research).

4. Applied Behavior Analysis I (3). The characteristics of applied behavioral research (assessment, analysis, intervention, evaluation), intervention research (clinical, community), applied procedures and programs, social validity, and ethical issues.

5. Principles of Behavior or Conceptual Foundations II (3). Advanced treatment of (a) the basic principles of behavior (stimulus equivalence) or (b) empirical research in selected content domains (behavioral development, verbal behavior) or (c) the historical, comparative, and contemporary foundations of behavior science.

6. Research Methods II (3). Advanced treatment of the tactics and strategies of basic applied, and intervention research (e.g., measurement, design), with an emphasis on conducting research in applied settings (e.g., community, school, organizations).

7. Applied Behavior Analysis II (3). Advanced or specialized reviews of applied and intervention research relevant to new approaches (e.g., ecobehavioral analysis, functional assessment), special problems (e.g., autism, substance abuse), atypical populations (e.g., adolescents, elders), and applied settings (e.g., schools, nursing homes).

8. Professional Development Seminar (1-3). An overview of professional development issues in behavior analysis (consent, deception, bias), professional communication (authorship, plagiarism, publications, presentations), and professional development (vita preparation, job search strategies).[

9. Research or Intervention Practicum I and II (6). Two supervised practicum courses in (a) basic or applied research or (b) behavioral interventions.

In addition, students must present the results of their research orally at a proseminar meeting before defending the master’s thesis and once again before defending the dissertation.

Master’s Thesis. Students complete an empirically-based master’s thesis and pass an oral examination on it. With an adviser’s approval, empirically-based theses from other programs may meet this requirement.

Research Skill. Doctoral students must demonstrate proficiency in a Foreign Language or Other Research Skill (FLORS) independent of, but consistent with and contributing to, their research programs. In the department, this may be met by (a) demonstrating proficiency in productive and receptive spoken language other than English or in sign language; (b) demonstrating reading proficiency in two languages other than English; (c) demonstrating competence in both computer programming and computer applications; (d) completing three thematically related courses beyond those required to satisfy the ABS doctoral requirements (e.g., research methods, quantitative

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methods, epidemiology, health psychology, law, linguistics, rehabilitation, public health); (e) at least two first-author publications in peer-refereed journals other than those used to fulfill written comprehensive requirements; or (f) at least three first-author scholarly presentations at professional meetings, no more than one of which may be a poster (the work must have been entirely completed at KU).

**Teaching Requirement.** Graduate students participate in the training and supervision of undergraduates. The requirement may be met by serving as a half-time teaching assistant for one semester or a quarter-time assistant for two semesters, in both cases assuming proportionate responsibility for class organization, teaching, grading, and office hours under a faculty member’s supervision. Students satisfy this requirement by working as paid graduate teaching assistants or by enrolling for 3 hours (.25 GTA) or 6 hours (.50 GTA) of credit in ABSC 941 Teaching and Conference.

**Comprehensive Examination.** Students begin work on the requirements of the comprehensive examination after fulfilling the research skill requirements. The examination has four components:

1. **Editorial Critiques.** Students write three editorial reviews of published or unpublished journal articles, all of them empirical. The articles cover a range of topics and experimental designs. The first two are graded pass-fail by the student’s adviser, the third must be passed by two other faculty members.

2. **Professional Writing Requirement.** Students write three papers on topics in behavioral science that are relevant to their research and approved by their advisers. The papers must include critical reviews of the relevant basic, applied, or conceptual literatures. The papers are graded blindly by three faculty members.

Alternatively, students may submit a sole- or first-author article, published or in-press, in a professional, peer-refereed journal for any of these papers. The articles may be reports of basic, applied, or intervention research; observational, empirical, or descriptive studies; critical reviews of the literature; or analyses of the field’s research methods, principles, concepts, or theories. Published or in-press chapters and in-submission grant proposals may be submitted as well, but the following publications are excluded: abstracts, book notes, commentaries, communications, editorials, letters to the editor, and technical notes. Although some portion of the manuscripts or research may have been completed before students entered the program, the manuscripts must be completed under the supervision of the student’s adviser as part of the department’s comprehensive examination. The journal articles, chapters, and proposals must be at least six manuscript pages long. A first-author publication or proposal must be accompanied by a letter from the student’s adviser stating that it meets the standards of the American Psychological Association for first authorship (i.e., primary responsibility for conceptualizing the project and preparing the manuscript; see the 2001 APA Publication Manual, pp. 6-7, 349-355). For in-press publications, students submit a letter confirming its final acceptance from the journal or book editor; for grant proposals, students submit a notice confirming its receipt from the granting agency. See the department’s Graduate Handbook for details.

3. **Review Paper.** Students write an extended, integrated, and critical review of a basic, applied, or conceptual literature relevant to applied behavioral science in preparation for an oral examination over it.

4. **Oral examination.** Upon successful completion of the three editorial critiques and two of the three professional writing requirements, students take an oral examination over the review paper.

**Dissertation.** In consultation with the adviser, the student proposes an empirically-based dissertation and a dissertation committee. All four components of the comprehensive examination must be passed before the oral defense of the dissertation may be scheduled. The written dissertation must be orally defended. Any interested member of the College’s graduate faculty may attend.

**Joint Ph.D./M.P.H. Degree in Applied Behavioral Science and Community Health Promotion**

The department offers a joint Ph.D./M.P.H. degree in collaboration with the Master of Public Health program in the Department of Preventive Medicine and Public Health at KU Medical Center. The degree incorporates efficiencies in the elective and research requirements of both departments. This is the first degree in the nation to combine an M.P.H. with the strengths of advanced study in applied behavioral science. Faculty and student research teams address issues in community health and development, child and youth health and development, disabilities and independent living, and healthy aging. Separate admission is required in both the Ph.D. program of the Department of Applied Behavioral Science and M.P.H. program in the Department of Preventive Medicine and Public Health. For information, see www.absc.ku.edu/graduate/joint_program.shtml.

**Clinical Child Psychology Program**

The department sponsors a joint Ph.D. program in clinical child psychology with the Department of Psychology. It prepares graduates for careers as scientist-practitioners in clinical child, pediatric, and adolescent psychology. Students complete a well-defined, cohesive, and integrated curriculum of course work in psychology, practice, research activities, and a clinical internship. The program is accredited by the American Psychological Association in clinical psychology with an emphasis in child psychology. For information, see Clinical Child Psychology in this catalog and www2.ku.edu/~clchild. Inquiries about the program, curriculum, applications, and admission requirements can be sent to ccpp@ku.edu.

**Behavior Analysis**

**Master’s Program.** The department plans to offer a sequence of courses accredited by the Association for Behavior Analysis as a master’s-level behavior analysis program. The courses also fulfill the requirements for the master’s degree in applied behavioral science (see www.abainternational.org).

**Doctoral Program.** The department offers a sequence of courses accredited by the Association for Behavior Analysis as a doctoral-level behavior analysis program. The courses fulfill most of the requirements for the department’s doctoral program (see www.abainternational.org).

**Certification.** The department’s program satisfies the 15 hours of requisite course work (225 contact hours over six content areas) for students to become Board Certified Behavior Analysts™. The Behavior Analysis Certification Board® (BACB®) has pre-approved 16 courses (640 contact hours) that, in whole or in part, meet the requirement for admission to its national certification examination. The courses are ABSC 702, ABSC 725, ABSC 735, ABSC 788, ABSC 796, ABSC 798, ABSC 805, ABSC 821, ABSC 841, ABSC 845, ABSC 848, ABSC 861, ABSC 931, ABSC 935, ABSC 940, and ABSC 961. Students must also obtain requisite supervised or mentored experience and have earned a master’s degree to sit for the examination (see www.bacb.com).

**Graduate Certificate Program**

**Community Health and Development.** The department offers a program in promoting community health and development that leads to a certificate. Educational objectives include (a) promoting an understanding of the processes and methods for enhancing community health and development that draw on theoretical foundations in behavioral science, public health, and community

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**KU’s Language Acquisition Studies Lab**

KU’s Language Acquisition Studies Lab works with children in more than 100 school districts to increase understanding of young children’s language development.

The Institute for Life Span Studies brings together 130 scientists affiliated with 22 academic departments to study human development from its genetic origins through the final stages of life.
In developing a curriculum that fulfills these requirements, students should consider courses that address the specific areas needed for state and province licensure. ABSC 599 Honors and Thesis in Applied Behavioral Science (3-6) is designed to provide students with the opportunity to conduct original research and develop necessary skills for professional practice. ABSC 680 Practicum in Advanced Laboratory in the Development of Behavioral Principles (3) focuses on practical applications of theoretical knowledge in a clinical setting. ABSC 679 Practicum in Behavior—Analytic Research in Early Childhood Development (3) is aimed at developing research skills and understanding of behavioral intervention strategies in early childhood. ABSC 632 Advanced Child Behavior and Development (3) covers advanced topics in child development and behavior, including methods of intervention and assessment. ABSC 626 Psychology of Adolescence (3) provides an in-depth exploration of adolescent psychology, including cognitive, social, and emotional development. All these courses are designed to help students develop comprehensive knowledge and skills necessary for professional practice.

Psychology Licensure

The department’s doctoral program in behavioral psychology does not satisfy requirements for licensure in psychology. Students wishing to meet these requirements should, with their advisors, consult the Association of State and Provincial Psychology Boards for state and province requirements, www.asppb.org. In developing a curriculum that fulfills these requirements, students should consider carefully whether the required courses and clinical experiences for state and province licensure are offered by the department and university, and are open to them.

Affiliated Research and Training Programs

For information about the Schiefelbusch Institute for Life Span Studies, Juniper Gardens Children’s Project, the Research and Training Center for Independent Living, the KU Work Group for Health Promotion and Community Development, and the Kansas Mental Retardation and Developmental Disabilities Research Center, see Schiefelbusch Institute for Life Span Studies in the Research and Academic Support chapter of this catalog.

Applied Behavioral Science Courses

ABSC 509 Contemporary Behavioral Science: Historical, Conceptual, and Comparative Foundations (3).

ABSC 535 Developmental Psychopathology (3).

ABSC 542 Applied Gerontology (3).

ABSC 555 Issues in Administering Early Childhood Services (2).

ABSC 560 The Juvenile Justice System: A Behavioral and Legal Perspective (3).

ABSC 565 Applied Developmental Psychology (3).

ABSC 599 Honors and Thesis in Applied Behavioral Science (1-5).

ABSC 606 Special Projects in the Community (1-10).

ABSC 620 Drug Abuse: From Basic Research to Public Policy (3).

ABSC 626 Psychology of Adolescence (3).

ABSC 632 Advanced Child Behavior and Development (3).

ABSC 671 Applied Behavior Analysis (3).

ABSC 672 Applied Behavior Analysis, Honors (3).

ABSC 675 Practicum in Infant-toddler Care and Early Intervention I (1-5).

ABSC 676 Practicum in Infant-toddler Care and Early Intervention II (1-5).

ABSC 677 Practicum in Preschool Education and Intervention I (1-5).

ABSC 678 Practicum in Preschool Education and Intervention II (1-5).

ABSC 679 Practicum in Behavior—Analytic Research in Early Childhood (3-6).

ABSC 680 Practicum in Advanced Laboratory in the Development of Behavioral Principles of Child Behavior with Autism (1-6).

ABSC 685 Practicum in Community-based Residential or Day Treatment Programs for Disabled Adults (3-6).

ABSC 687 Practicum in Behavioral Gerontology (1-6).

ABSC 690 Practicum in Community Health and Development (1-6).

ABSC 691 Practicum in Community Health and Development, Honors (1-6).

ABSC 694 Practicum in Juvenile Problems (3-6).

ABSC 695 Special Practicum in: _____ (3-6).

ABSC 696 Special Practicum in, Honors: _____ (3-6).

ABSC 698 Special Research Practicum in: _____ (3-6).

ABSC 699 Special Research Practicum in, Honors: _____ (3-6).

ABSC 701 Parenting in Modern Society (3). The theoretical study of parenting and parent-child relationships, techniques for analyzing common parenting problems, designing appropriate interventions, fostering effective communication skills, understanding issues of diversity, and promoting parent education programs. Many of the issues that arise in parent-child relationships are of concern to professionals who provide care and support of families and children are emphasized throughout. Students develop analytical skills through reading, discussion, and application of theoretical and empirical research. (Formerly HDFL 701.) Prerequisite: ABSC/HDFL 160 or equivalent knowledge of child development or child psychology. LEC

ABSC 702 Curriculum Development for Young Children (3). A survey of educational materials and activities that are appropriate for young children (birth to age 8). Students explore several components of effective curriculum (e.g., objectives, effective methods of activity presentation, teaching strategies) and learn to combine them to construct curricula for a range of content and skill areas. By focusing on the functional components of curriculums, students learn to construct, critically evaluate, and modify them for both typically developing children and children with special needs. A BACC® pre-approved course. (Formerly HDFL 702.) LEC

ABSC 703 Leadership in Early Education Programs: Theory and Research (3). Effective leadership skills and professional roles associated with the administration of early childhood services and programs are examined in this course. Theoretical principles, empirical research, and professional responsibilities inherent in the provision of quality service, including needs assessment, organizational skills, delivery systems, human resource management, communication skills, grant writing, and ethical considerations, conflict resolution, and advocacy are explored through readings, discussion, and assigned projects. Not open to students who have completed ABSC 555. (Formerly HDFL 677.) Prerequisite: ABSC/HDFL 140 or equivalent knowledge of child development. LEC

ABSC 704 Research Practicum in Clinical Child Psychology (3). This course provides students in the Clinical Child Psychology Program with the opportunity to enhance and consolidate their research activities by fulfilling one of the elective cluster course requirements. This practicum involves a contract with a research adviser and the program director. The contract includes definable products and dates for completion to prepare research for submission for publication, develop a grant proposal, or conduct additional research project independent of other requirements in the program. The course is not to be taken as an overload, but is to be part of a full-time course schedule. May be repeated. (Same as PSYC 704.) (Formerly HDFL 704.) Prerequisite: Graduate standing in clinical child psychology and instructor permission. LEC

ABSC 705 Pediatric Psychology (3). Discussion of behavior problems commonly encountered in the pediatric population, including reviewing data-based methodologies for remediation. Topics include general child rearing skills, bedtime problems, enuresis, encopresis, toilet training, self-injurious behavior, temper tantrums, behavior in community settings, child abuse, psychotropic drugs for children, adolescent behavior problems and selection of children’s play materials. (Formerly HDFL 705.) Prerequisite: ABSC/HDFL 160, ABSC/HDFL 632, or PSYC 602. LEC

ABSC 706 Special Topics in Clinical Child Psychology: _____ (3). A course offering detailed discussion of the literature and research methods of a special topic within the field of child and pediatric psychology. Topic and instructor change by semester and will be announced in the Schedule of Classes. May be repeated. (Same as PSYC 706.) (Formerly HDFL 706.) Prerequisite: Graduate standing in clinical child psychology and instructor permission. LEC

ABSC 709 Biology and Behavior (3). A course on the role of physiology and anatomy in behavior, with an emphasis on their participation in the basic behavioral processes and in typical and atypical behavioral development. The course also addresses issues in measurement and current research. (Formerly HDFL 709.) Prerequisite: ABSC/HDFL 796; ABSC/HDFL 798 recommended. LEC

ABSC 710 Community Health and Development (3). This course extends knowledge and skills for addressing issues in community health and development (e.g., substance abuse, adolescent pregnancy, child and youth development, prevention of violence). Students learn core competencies such as analyzing community problems and needs, developing strategic planning, intervention, and evaluation, and then apply these skills to issues that matter to them and to the communities they serve. (Formerly HDFL 710.) (Same as INS 871.) LEC

ABSC 716 Experimental Problems in Community Settings (1-5). In the experimental design and analysis of community settings. No more than 10 hours total. (Formerly HDFL 716.) Prerequisite: Instructor permission. RSH

ABSC 719 Experimental Field Work in Community Settings (1-5). In the methods and techniques of the experimental design and analysis of community settings through supervised participation in established research programs. Emphasizes the techniques of gathering original experimental data. No more than 10 hours total. (Formerly HDFL 719.) Prerequisite: Instructor permission. RSH

ABSC 721 Biological Bases of Mental Retardation (4). This course deals with the biological substrates of mental retardation. Retardation is classified as a medical syndrome, rather than as a behavioral pattern, but behavioral characteristics are quite prevalent. Attention is directed to both genetic causes such as the chromosomal anomalies (e.g., Mongolism) and molecular and metabolic errors (e.g., phenylketonuria), as well as to the environmentally produced retardation by nutritional deficiency, prenatal rubella, and brain trauma. (Formerly HDFL 721.) Prerequisite: One course in biology or equivalent. LEC

ABSC 723 Adolescent Adjustment (3). An overview of adolescence with primary emphasis on various adjustment difficulties and respective therapeutic approaches. Content to provide perspectives on relevant practice, research, theory, and contemporary social forces. (Formerly HDFL 723.) Prerequisite: Instructor permission. LEC
ABSC 725 Research Methods and Application (3). Surveys research methods used to identify, analyze, and interpret data, and issues in planning and evaluating sequences. Surveys the many approaches currently being used across the life span (e.g., childhood, adolescence, elders) and in varied settings (homes, classrooms, group-care facilities, and communities). Discusses research methods and concepts (e.g., prediction, control, reliability, validity) within scientific, psychological, and biological domains. Develops strategies for gathering descriptive and experimental methods, direct and indirect measurement, graphic and statistical analysis, and single-subject and group experimental designs. Examines ethics and social responsibility in research. Provides opportunities to read secondary data, formulate research questions, and write and present research proposals. (Formerly HDFL 725.) Prerequisite: Instructor permission. RSH

ABSC 730 Developmental Neurobiology (3). This course consists of lectures and discussion sessions on topics that describe the structural and functional maturational processes that occur within the nervous system. The areas covered deal with the morphological, physiological, and biochemical changes in the developing central nervous system of vertebrates (including human infants), and with the interaction of the external environment with some of these maturational processes. Prerequisite: Introductory human development, psychology, or biology course. LEC

ABSC 735 Within Subjects Research Methodology and Direct Observation (3). A graduate level introduction to the logic of experimentation, direct observation strategies, and research conducted using individual (e.g., single subject) and time series experimental designs. An ABA effective and socially valid care and education course. (Formerly HDFL 735.) Prerequisite: Graduate standing in applied behavioral science or instructor permission. LEC

ABSC 741 Readings in Gerontology (3-5). Supervised readings in topical areas of gerontology. May be repeated for credit with departmental consent. (Formerly HDFL 741.) Prerequisite: Instructor permission. RSH

ABSC 742 Research in Gerontology (1-10). Original investigations of some unsolved problems relating to adult development and aging. (Formerly HDFL 742.) Prerequisite: Graduate standing. May be repeated for credit with departmental consent. (Formerly HDFL 742.) Prerequisite: Instructor permission. RSH

ABSC 756 Philosophical Bases of Early Childhood Education (3). Historical influences and current theoretical models of early childhood education are addressed through a survey and analysis of the literature. Not open to students who have completed ABSC 356. (Formerly HDFL 756.) Prerequisite: ABSC/HDIFL 160 or equivalent knowledge of child development or child psychology. LEC

ABSC 765 Evaluating and Disseminating Scientific Material I (1-3). Intensive training in the evaluation and production of scientific critiques and reviews of current issues in the field of behavioral science. SPOT, lab, and statistical techniques are emphasized. May be repeated. (Formerly HDFL 765.) Prerequisite: Instructor permission. LEC

ABSC 787 Gerontolgy Proseminar (3). A proseminar coordinated by the Gerontology Center. The proseminar explores essential areas of gerontology for researchers and practitioners, providing a multidisciplinary (e.g., psychology, biology, sociology, communication) perspective on aging. The proseminar surveys contemporary basic and applied research, service programs, and policy and management issues in gerontology. (Same as ANS 767, COMS 787, PSYC 787, and SOC 767.) (Formerly HDFL 787). LEC

ABSC 788 Designing Early Education Environments (3). This course reviews empirically-supported strategies for designing the physical and psychological environments for young children with and without disabilities. Topics will include: early educational theory, individualized curricula and goal selection strategies, various instructional and organizational strategies, inclusive education, and special topics in the field of early childhood education. May be repeated. (Formerly HDFL 786.) Prerequisite: Instructor permission. LEC

ABSC 801 Design and Analysis of Community Development Methods (1-6). An introduction to community development and social planning techniques and practices that can be used to promote community improvement. May be repeated if the content differs. (Formerly HDFL 801.) Prerequisite: Instructor permission. RSH

ABSC 804 Research in Community Health Promotion (1-6). Supervised, original investigations of problems relevant to community health, such as the prevention of substance abuse or promotion of healthy outcomes. As appropriate, the course is focused on any combination of: literature research, research planning, and preparation conducting research, analyzing data, writing research reports, or preparing oral reports of completed research. (Formerly HDFL 804.) Prerequisite: Instructor permission. RSH

ABSC 805 Functional Behavioral Assessment (3). The strategies, tactics, and ethics of functional assessment are presented in the larger context of behavioral assessment (e.g., normative and idiographic approaches). Research articles related to functional assessment and assessment-based interventions are carefully reviewed to determine the appropriate conditions for each type of assessment and intervention. (Formerly HDFL 805.) Prerequisite: ABSC 805 and instructor permission. FLD

ABSC 806 Functional Behavioral Assessment Practicum (1-6). This course provides supervised experience in the use of functional behavioral assessment in home, clinic, or educational environments with young children presenting problem behaviors. (Formerly HDFL 806.) Prerequisite: ABSC 805 and instructor permission. FLD

ABSC 807 Design and Evaluation of Community Health Promotion Programs (3). A study of the methods used to develop and evaluate community health promotion programs. The course addresses topics of interest to participants, such as substance abuse, adolescent pregnancy, or child outcomes. May be repeated for credit if the content differs. (Formerly HDFL 807.) Prerequisite: Instructor permission. RSH

ABSC 809 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. (Formerly HDFL 809.) (Same as PSYC 809.) Prerequisite: Graduate standing in child psychology. LEC

ABSC 810 Introduction to Developmental Assessment (3). A course covering the general principles of developmental assessment from birth through adulthood, with special emphasis on the history and nature of assessment instruments and the criteria for acceptance, reliability, and stability of results. Selected assessment techniques for infants, preschool children, elementary school children, adolescents, and adults are reviewed in detail. Prerequisite: ABSC 797 and consent of instructor. LEC

ABSC 811 Achievement and Intellectual Assessment in Clinical Child Psychology (3). Course covers the theoretical, research, administration, and reporting of psychological assessment of children in individuated and developmental domains, including children, adolescents, and adults within cultural and developmental contexts. The range of psychological instruments examined includes, for example, WIAT, K-ABC, W-J, S-B, WISC, WAIS, and WPPSI. (Same as PSYC 811.) Prerequisite: Graduate standing in clinical child psychology. LEC

ABSC 812 Behavioral and Personality Assessment of Children (3). Lecture, laboratory, field work, and supervision. Theory and applications in the psychological evaluation of children with standardized assessment techniques. The administration and interpretation of behavioral and personality functioning in children. (Formerly HDFL 812.) (Same as PSYC 812.) Prerequisite: Graduate standing in clinical child psychology. LEC

ABSC 813 Behavioral Science Research Proseminar (1-5). A master’s level professional seminar in which faculty and students present research proposals, other formal presentations of completed empirical research, reviews of the literature, and other areas of scholarship; and engage discussion about contemporary empirical, conceptual, and professional issues in applied behavioral science. May be repeated for a total of six credits. (Formerly HDFL 813.) Prerequisite: Graduate standing in applied behavioral science or instructor permission. LEC

ABSC 814 Advanced Child and Family Assessment (3). Lecture, laboratory, field work, and supervision. Supervised experience in specialized psychological assessment approaches for children and families. Emphasis on evaluating, observation, assessment-based interventions are carefully reviewed to determine the application of current knowledge. An ABA-accredited and BACB® pre-approved course. (Formerly PSYC 814.) Prerequisite: Graduate student in clinical child psychology. LEC

ABSC 820 Advanced Child Development (3). A survey of the basic empirical research in the field of child development, covering intelligence, cognition, perception, attention, memory, social behavior, and personality. Emphasis on the content, its implications, and their special problems in relation to each other are addressed. (Formerly HDFL 820.) (Same as PSYC 820.) Prerequisite: A course in child development or equivalent. LEC

ABSC 821 Behavior Analysis of Child Development (3). An advanced graduate seminar on the behavior-analytic view of child development. Students examine the behavior-analytic view of child development and compare contrast this approach with other systems for understanding development. Students also review and critically evaluate current and seminal literature related to several different developmental domains (e.g., motor, emotional, social, cognitive development) and explore implications for the application of current knowledge. An ABA-accredited and BACB® pre-approved course. (Formerly HDFL 821.) Prerequisite: ABSC 796 and consent of instructor. LEC

ABSC 822 Children and Public Policy (3). This course examines how public policies are developed to meet the special needs of children. It examines the child and family policy in the United States and other countries, policy-related research on children, major policy issues affecting children, and child advocacy. (Formerly HDFL 822.) Prerequisite: Instructor permission. LEC

ABSC 824 Treatment of Severe Learning Problems (3). This course reviews new approaches to working with persons with retardation and autism; theoretical orientations and how they affect implementation of procedures; and current research outcomes in various developmental areas of persons with retardation. It covers approaches to working with persons with autism, spanning the entire life span, that are based on ecological and stimulus control variables. Ethical and practical implications are the focus of class lectures and discussions. (Formerly HDFL 824.) LEC

ABSC 825 Social Development (3). A lecture and discussion course in social development. Includes such topics as socialization, personality development, family, community, and social development, as well as the literature on family processes, peer relations, aggression and prosocial behavior, child abuse and neglect, family violence, child care, and the media. (Same as PSYC 825.) (Formerly HDFL 880.) Prerequisite: A course in child psychology or development LEC
ABSC 828 Research in Early Intervention with Children (3). A seminar on current issues in early intervention for children who are at risk for or who have special needs. Provides foundation for evaluating and understanding research in early intervention. Includes historical, conceptual and legislative underpinnings of early intervention, risk factors affecting development, methodological issues in early intervention research, best practice standards, and applications to social, language, and pre-academic domains. (Formerly HDFL 828.) LEC

ABSC 834 Directed Readings in Community Health Promotion (1-5). Supervised readings in topical areas of community health promotion, such as the prevention of substance abuse and promotion of child outcomes. A program of study, conferences and reports is developed by the instructor and student. (Formerly HDFL 834.) RSH

ABSC 837 Advanced Study of People with Disabilities (3). This course reviews major approaches in identifying disability pathogenesis and explores the biological bases of selected congenital physical disabilities, and etiologies of selected acquired physical disabilities. Rehabilitation approaches and the role of scientist-practitioners in working with people with disabilities are also discussed. This course primarily covers adults with physical disabilities. (Formerly HDFL 837.) LEC

ABSC 840 Theoretical Concepts of Human Development and Child Care Practice (3). Basic introduction to treatment concepts and procedures related to child development and child-care programs. The major goal is to provide a theoretical framework that is effective in dealing with various types of child deviancy. (Formerly HDFL 840.) Prerequisite: Graduate standing or instructor permission. LEC

ABSC 841 Legal, Ethical, and Professional Issues in Applied Behavioral Science (1-3). Seminar designed to provide an overview of topics such as principles guiding research, human subjects procedure, animal subjects, deception in research, duties to refer, informed consent in special populations, data ownership and sharing, bias and fraud in data collection and analysis, scientific communication, professional publication, publication authorship, duplicate or fragmentary publication, scientific ethics, treatment of misconduct, report writing, independent research, job search, and job strategies. A BACB® pre-approved course. (Formerly HDFL 841.) Prerequisite: Graduate standing in applied behavioral science. LEC

ABSC 845 Rules of Evidence for Applied Research (3). A course on experimental problems specific to research on socially significant behaviors of humans. Emphasis on editing and critiquing research articles of the type submitted for publication in applied research journals. (Formerly HDFL 845.)LEC

ABSC 846 Practicum in Clinical Child Psychology I (1-3). Lecture, laboratory, field work, and supervision appointment. Psychological evaluation and treatment of children and their families; supervised, progressive experience in psychological interventions in clinical child psychology. (Same as PSYC 846.) (Formerly HDFL 846.) Prerequisite: Graduate standing in clinical child psychology and instructor permission. FLD

ABSC 847 Practicum in Clinical Child Psychology II (1-3). A continuation of ABSC 846. (Same as PSYC 847.) Prerequisite: Graduate standing in clinical child psychology and instructor permission. FLD

ABSC 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 are examined. An ABA-accredited and BACB® pre-approved course. (Formerly HDFL 848.) LEC

ABSC 856 An Interdisciplinary Approach to Intervention with the Handicapped (3). This is the preparation for individuals working with children with exceptional disabilities across the life span. Its focus is on designing strategies for individual intervention and treatment programs by an interdisciplinary team. Designed for students in social work, speech pathology, psychology, nutrition, auditing, special education, physical therapy, nursing, child development, behavior analysis, and related fields. (Formerly HDFL 707.) Prerequisite: A basic course in child development or instructor permission. LEC

ABSC 861 Applied Behavior Analysis (3). This advanced course extends knowledge and skill in analyzing behavioral problems, designing interventions, and planning applied research projects. Topics include the selection of problems and target populations, analysis of problems and goals, designing measurement systems, developing interventions, and disseminating products from applied behavioral research. Students use examples from their own applied research. An ABA-accredited and BACB® pre-approved course. (Formerly HDFL 861.) LEC

ABSC 865 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. (Formerly HDFL 888.) Prerequisite: Graduate standing or instructor permission. LEC

ABSC 866 Service System and Consumer Issues in Developmental Disabilities (3). This course provides a service-system perspective on developmental disabilities. Students learn (a) how service systems have developed for people with developmental disabilities; (b) about service systems from a perspective of agency administrator; (c) about program evaluation; (d) about research in areas of social services; (e) about health insurance, Medicaid, Medicare, CHIPS, Title V; and (f) about consumers, themselves, about the barriers they face in obtaining needed services. Finally, students learn about advocating for service-system change. (Formerly HDFL 793.) Prerequisite: Graduate standing or instructor permission. LEC

ABSC 870 Practicum I in Behavioral Psychology (1-6). Instruction and supervised laboratory or field work for master’s students. Practice is offered by different instructors on different topics; may be repeated for credit if the content differs. Topics and instructors are announced in the Schedule of Classes. Prerequisite: Graduate standing in applied behavioral science or instructor permission. FLD

ABSC 871 Practicum I in Behavior Analysis: _____ (1-6). Instruction and supervised laboratory or field work for master’s students. Practice is offered by different faculty members on different topics; may be repeated for credit if the content differs. Topics and instructors are announced in the Schedule of Classes. Prerequisite: Graduate standing in applied behavioral science or instructor permission. FLD

ABSC 872 Practicum I: _____ (1-6). Instruction and supervised laboratory or field work for master’s students. Practice is offered by different faculty members on different topics; may be repeated for credit if the content differs. Topics and instructors are announced in the Schedule of Classes. Prerequisite: Graduate standing in applied behavioral science or instructor permission. FLD

ABSC 873 Practicum in Educational Psychological/Rehabilitative Services: _____ (3-6). This course is for students who wish to complete practicum experiences in services related to persons with retardation, autism, or physical disabilities in programs in various settings, such as the Ann Sullivan Center in Lima, Peru and the Algeria School in Paraguay. The course is designed to give students more than a year’s exposure with professionals in these programs on a semester or summer basis. The course consists of participation in professional activities associated with the practicum program and a report of these activities. Prerequisite: Instructor permission. FLD

ABSC 874 Practicum in Consumer Evaluation of Behavior Programs (3-6). A practicum course designed to provide students with the knowledge, background, and practical experience in the conduct of consumer evaluations for behavioral treatment programs. (Formerly HDFL 855.) Prerequisite: Instructor permission. FLD

ABSC 875 Practicum in Community Health Promotion I (1-6). A practicum course designed to provide students with knowledge, background, and practical experience in the implementation of community health promotion projects and their evaluation. May be repeated for credit if the content differs. (Formerly HDFL 808.) Prerequisite: Instructor permission. FLD

ABSC 876 Practicum in Community Development (1-6). A practicum course designed to provide students with knowledge, background, and practical experience in the implementation of community improvement projects and their evaluation. May be repeated for credit if the content differs. (Formerly HDFL 802.) Prerequisite: Instructor permission. FLD

ABSC 877 Advanced Practicum in Gerontology (1-6). Supervised practical experience in working with elders in home, community, or institutional settings. Regular individual conferences with faculty are used to evaluate student progress. (Formerly HDFL 849.) Prerequisite: Graduate standing or instructor permission. FLD

ABSC 880 Early Childhood Practicum for Allied Professionals (1-6). Professionals in fields such as journalism, social welfare, and psychology may have career interests that include work with or on behalf of young children. This practicum provides students with individualized opportunities to work with young children in a group setting in order to extend their professional skills. (Formerly HDFL 790.) Prerequisite: Instructor permission. FLD

ABSC 881 Early Childhood Care and Intervention Practicum I (1-6). A course covering the design, implementation, and evaluation of curriculum design management of groups of young children. May be repeated for no more than a total of six credit hours. (Formerly HDFL 791.) Prerequisite: Instructor permission. FLD

ABSC 882 Early Childhood Care and Intervention Practicum II (1-6). A course to assess and teach skills in diagnosis and evaluation of particular problems in the developmental process of young children (1-5 years of age), and to design and implement interventions. May be repeated for no more than a total of six credit hours. (Formerly HDFL 792.) Prerequisite: ABSC 791 and instructor permission. FLD

ABSC 883 Early Childhood Administration Practicum (1-6). 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 on their behalf. May be repeated for no more than a total of six credit hours. (Formerly HDFL 793.) Prerequisite: ABSC 791 and instructor permission. FLD

ABSC 884 Early Childhood Early Intervention Practicum (1-6). Laboratory teaching in an early childhood classroom that includes children who are developmentally delayed, demonstrates behavioral or learning difficulties, or have other developmentally disabilities. Experience includes individualized programming for chil-
dren with special needs, as well as group management and group curriculum planning. May be repeated for no more than six credit hours. (Formerly HDFL 794.) Prerequisite: ABSC 791 and instructor permission. LEC

ABSC 885 Early Childhood Teacher Training Practicum (1-6). Experience in supervising staff who work in programs for young children. Supervision includes orienting, monitoring, and evaluating staff performance; opportunities for interaction with other professionals; experience in facilitating staff communication; and consulting on research projects. (Formerly HDFL 795.) Prerequisite: ABSC 791 and instructor permission. LFD

ABSC 886 Developmental Assessment Practicum: Preschool (1-6). This course provides direct experience in the developmental assessment of a selected age group, such as infants, preschool and elementary children, adolescents, or adults. It may be repeated providing the age group specification is not repeated. (Formerly HDFL 811.) Prerequisite: HDFL 810 or an equivalent course. LFD

ABSC 887 Clinical Practicum in Pediatric Psychology (1-6). Supervised experience with pediatric patients referred for behavioral problems, including, for example, temper tantrums, enuresis, encopresis, and hyperactivity. Also includes evaluation and treatment of children with commonly encountered behavior problems. In addition to providing experiences in the areas related to behavior science for master’s students, the course pertains to relevant and interesting preventive medicine literature in specialized fields of applied behavioral science. May be repeated for credit if the content differs. (Formerly HDFL 701.) Prerequisite: Graduate standing in applied behavioral science or instructor permission. LEC

ABSC 891 Research in: Behavior Analysis (1-6). Supervised research investigations in basic or applied behavioral science for course in measurement, research methods and designs, and the conduct of research in the behavioral sciences. May be repeated for credit if the content is different. (Formerly HDFL 800.) Prerequisite: Graduate standing or instructor permission. RSH

ABSC 892 Readings in: Behavior Analysis (1-3). An individual, supervised study of recent research and scholarship for master’s students. The course emphasizes current scholarship in selected areas of basic and applied behavioral science and its conceptual foundations. Designed for students whose needs cannot be met in other courses. May be repeated for credit if the content differs. (Formerly HDFL 833.) Prerequisite: Graduate standing or instructor permission. RSH

ABSC 893 Special Topics in: Behavior Analysis (1-3). A research and readings course for master’s students. It allows them to concentrate their studies on selected basic and applied problems in behavioral science and carry out independent research. May be repeated for credit if the content differs. (Formerly HDFL 722, HDFL 724, HDFL 725, HDFL 799.) Prerequisite: Graduate standing or instructor permission. LEC

ABSC 894 Study Abroad Topics in: Behavior Analysis (1-3). A course designed to enhance international and cross-cultural perspectives in the behavioral sciences. May be repeated for credit if the content differs. Prerequisite: Graduate standing or instructor permission. LEC

ABSC 897 Master’s Thesis in Clinical Child Psychology (1-10). Supervised research experience leading to the thesis leading to master’s degree in clinical psychology and instructor permission. RSH

ABSC 899 Master’s Thesis in Applied Behavioral Science (1-9). Supervised research experience for the thesis leading to a master’s degree in applied behavioral science. May be repeated. (Formerly HDFL 899.) Prerequisite: Graduate standing in applied behavioral science or instructor permission. THE

ABSC 900 Self-control, Impulsivity, and Human Addictive Disorders (3). This course examines basic research designed to explore variables affecting animal and human decision making; particularly decisions classified as demonstrating impulsivity and self-control. The evidence for genetic and learning contributions to patterns of impulsive decision making will be explored, as will the relation between impulsivity and a range of addictive disorders. LEC

ABSC 905 Psychopathology in Children (3). Diagnosis and treatment of psychological problems in childhood and adolescence. Preference given to graduate students in child clinical psychology, school psychology, and counseling psychology. (Same as PSYC 905.) Prerequisite: Fifteen hours of graduate credit in psychology or consent of instructor. LEC

ABSC 908 Psychotropic Drugs: Effects Through the Life Span (3). This course covers basic pharmacological concepts, neuropharmacological principles, and the therapeutics of drug effects on behavior. Special attention is given to age and history as influences in psychopharmacological outcomes. (Formerly HDFL 908.) LEC

ABSC 913 Behavioral Science Research Proseminar (1-3). A doctoral level pro- fessional seminar in writing, presentation of proposals, oral and formal presentations of completed empirical research, reviews of the literature, and other areas of scholarship; and engage discussion about contemporary empirical, conceptual, and professional issues in applied behavioral science. May be repeated for a total of eight credits. (Formerly HDFL 913.) Prerequisite: Graduate standing in behavioral psychology or instructor permission. LEC

ABSC 920 Seminar in Language Development (3). The course pertains to relevant research regarding infant speech development, vocabulary development, linguistics, and developmental assessment, articulation development, and language retardation. (Same as SPLH 966.) (Formerly HDFL 920.) LEC

ABSC 921 The History and Systems of Psychology (3). An advanced graduate seminar on the history of psychology and its systems, and their relations to contemporary psychology. Pertinent issues in the history and philosophy of science are addressed (e.g., scientific method, history of psychology of psychology (e.g., positivism). (Formerly HDFL 891.) Prerequisite: Master’s degree or instructor permission. LEC

ABSC 931 Verbal Behavior (3). An advanced graduate seminar on the analysis of the verbal behavior of the proficient speaker and the biological, environmental, and motivational factors affecting it. As well as implications for language training and remediation are integrated throughout. Prerequisites and rebattles are examined, along with current empirical and conceptual advances in research and theory. An ABA-accredited and BACB® pre-approved course. (Formerly HDFL 831.) Prerequisite: ABSC 798, advanced coursework in psychologists or linguistics, or instructor permission. LEC

ABSC 934 Directed Readings in Clinical Child Psychology (1-3). Designed to meet the needs of advanced students whose study in clinical child psychology cannot be met with present courses or for whom advanced work is desired in a specialized area of study. (Formerly HDFL 934.) Prerequisite: Graduate standing in clinical child psychology and instructor permission. RSH

ABSC 935 Experimental Foundations of Applied Behavior Analysis (3). A graduate level introduction to basic behavioral research and practice. This course surveys seminal and current research in the experimental analysis of behavior and relates this work to research and practice in applied behavior analysis. Topics include respondent conditioning, complex schedule performance, avoidance, stimulus control, and choice. Prerequisite: ABSC 798 and consent of instructor. LEC

ABSC 940 Measurement and Experimental Design for Applied Research (3). This is an advanced course on research methods helpful in the development, evaluation, and dissemination of effective and sustainable behavior analytic programs. The practices examined involve (a) selecting non-reactive measures of staff implementation behaviors; (b) selecting effective and sustainable components of a staff management program; and (c) experimentally analyzing the effectiveness and sustainability of the staff management program. Particular emphasis is placed on the analysis of principles of behavior that determine the maintenance of staff interventions and, therefore, the survival of behavior programs in their post-research phase. Students read and discuss the literature on factors that promote or impede program survival. Students design an intervention program using the practices examined in the course, simulate an experimental analysis of the program, and write a JABA-style manuscript describing the program and their simulated data. An ABA-accredited and BACB® pre-approved course. (Formerly HDFL 940.) Prerequisite: ABSC/HDFL 735 or HDFL 803, ABSC/HDFL 796, and ABSC/HDFL 871 or instructor permission. LEC

ABSC 941 Teaching and Conference (3-6). This course is used by graduate students fulfilling the doctoral program teaching requirement. Students assist in class preparation and organization, teaching, grading, and office hours or serve as discussion section leaders or laboratory course supervisors. They meet regularly with the faculty members they are assisting. Students enroll for 3 hours for the equivalent of a 25%-assistantship and 6 hours for a 50% equivalent. (Formerly HDFL 941.) Prerequisite: Graduate standing or instructor permission. LEC

ABSC 942 Techniques of Data Analysis for Applied Research (3). This course ex- amines data analysis procedures commonly used with both large group and single subject experimental designs. In addition to presenting specific data analysis techniques, the strengths and weaknesses inherent in the various techniques are carefully reviewed and evaluated. (Formerly HDFL 942.) Prerequisite: ABSC/HDFL 735 or HDFL 803 and an intermediate statistics course. LEC

ABSC 943 Advanced Practicum in Clinical Child Psychology I (1-3). Lecture, laboratory, fieldwork, 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. (Formerly HDFL 943.) (Same as PSYC 943.) Prerequisite: Graduate standing in clinical child psychology and instructor permission. LEC

ABSC 944 Advanced Practicum in Clinical Child Psychology IV (1-3). A continuation of ABSC/HDFL 943 and PSYC 943. (Formerly HDFL 944.) (Same as PSYC 944.) Prerequisite: Graduate standing in clinical child psychology and instructor permission. LEC

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.

KU graduate programs in biological sciences ranked 30th in the nation, according to U.S. News & World Report’s “America’s Best Graduate Schools” rankings for 2007.

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ABSC 947 Advanced Practicum in Clinical Child Psychology V (1-3). A continuation of ABSC 946. Prerequisite: Consent of Program Director or by petition. May be repeated for credit if the content differs. (Formerly HDFL 947.) Prerequisite: Graduate standing in clinical psychology and instructor permission. FLD

ABSC 951 The Analysis of Cognition (3). A graduate seminar in the behavior analysis of cognition. Topics include consciousness, attention, perception, memory, language, rule-governed behavior, problem-solving, decision-making, generativity, creativity, and beliefs and attitudes. Comparisons and contrasts are drawn among different theoretical orientations (information-processing, parallel-processing, normative theories). Prerequisite: ABSC 798, advanced coursework in cognitive psychology, or instructor permission. RSH

ABSC 961 Advanced Seminar in Applied Behavior Analysis: ______ (3). An advanced seminar examining the literature and research methods in specialized areas of applied behavior analysis (e.g., developmental disabilities, community health, organization development). May be repeated for credit if the content differs. An ABA-accredited and BACB® pre-approved course. (Formerly HDFL 971.) LEC

ABSC 963 Clinical Child Psychology Internship (1). Three consecutive enrollments, covering a minimum of eleven months of experience in an approved clinical psychology field setting; supervision by qualified clinical child psychology faculty and 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. (Formerly HDFL 963.) (Same as PSYC 963.) Prerequisite: Completion of Ph.D. comprehensive examinations, graduate standing in clinical child psychology, and permission of clinical child psychology faculty. FLD

ABSC 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 the media. May be repeated. (Formerly HDFL 965.) Prerequisite: Instructor permission. LEC

ABSC 970 Practicum II in Behavioral Psychology (1-6). Advanced supervised laboratory or field work for doctoral students beyond ABSC 971. May be repeated for credit if the content differs. Prerequisite: Graduate standing in behavioral psychology or instructor permission. FLD

ABSC 971 Practicum II in Behavior Analysis: ______ (1-6). Advanced instruction and supervised laboratory or field work for doctoral students beyond ABSC 971. May be repeated for credit if the content differs. Prerequisite: Graduate standing in behavioral psychology or instructor permission. FLD

ABSC 972 Practicum II in: ______ (1-6). Advanced instruction and supervised laboratory or field work for doctoral students beyond ABSC 972. May be repeated for credit if the content differs. Topic and instructor are announced in the Schedule of Classes. Prerequisite: Graduate standing in applied behavioral science or instructor permission. FLD

ABSC 976 Therapeutic Interventions with Children (3-5). Clinical approaches to the therapeutic treatment of children with special emphasis on research findings and laboratory (practicum) experience. A survey of relationship therapies, operant strategies, system approaches, parent education and play therapy by the right therapist for a specific child with a particular problem. (Same as PSYC 976.) Prerequisite: Instructor permission. FLD

ABSC 989 Methods of Obtaining External Research Funding (1-3). The objective of this course is to demystify this process by having participants submit their first independent research grant application. Participants learn about the characteristics of different funding mechanisms and agencies, the characteristics of successful and unsuccessful grant applications, how to write an initial research proposal, the competitive application, ethical issues that influence each stage of the development and submission process, and the nuts and bolts of grant development and management. Specific activities include critiquing an original NIH grant application. Participants learn about the characteristics of successful and unsuccessful grant applications. How to write an initial research proposal. May be repeated for credit if the content differs. Topic and instructor are announced in the Schedule of Classes. Prerequisite: Graduate standing in applied behavioral science or instructor permission. FLD

ABSC 990 Advanced Seminar in: ______ (3). An advanced seminar for doctoral students. It examines basic and applied research literatures in specialized fields of applied behavioral science. May be repeated for credit if the content differs. (Formerly HDFL 990.) Prerequisite: Graduate standing in behavioral psychology or instructor permission. LEC

ABSC 991 Advanced Research in: ______ (1-9). Advanced, supervised research in basic or applied behavioral science for doctoral students. The course may focus on any combination of a literature review, research planning and preparation, conducting research, analyzing data, writing research reports, and preparing oral reports of completed research. May be repeated for credit if the content differs. (Formerly HDFL 991.) Prerequisite: Graduate standing in behavioral psychology or instructor permission. RSH

ABSC 992 Advanced Readings in: ______ (1-6). An advanced individual, supervised study of recent research and scholarship for doctoral students. May be repeated for credit if the content differs. (Formerly HDFL 992.) Prerequisite: Graduate standing in behavioral psychology or instructor permission. RSH

ABSC 993 Advanced Special Topics in: ______ (1-3). An advanced research and readings course for doctoral students. It allows them to concentrate their studies on selected basic and applied problems in behavioral science and carry out independent research. May be repeated for credit if the content differs. (Formerly HDFL 993.) Prerequisite: Graduate standing in behavioral psychology or instructor permission. RSH

ABSC 994 Advanced Study Abroad Topics in: ______ (1-6). An advanced course designed to enhance international experience in topic areas related to behavioral science for doctoral students. May be repeated for credit if the content differs. Prerequisite: Graduate standing in behavioral psychology or instructor permission. LEC

ABSC 998 Doctoral Dissertation in Clinical Child Psychology (1-10). Research experience making an original contribution to literature in clinical child psychology. (Same as PSYC 998.) (Formerly HDFL 998.) RSH

ABSC 999 Doctoral Dissertation in Behavioral Psychology (1-9). Advanced supervision of doctoral research and scholarship related to behavioral science for doctoral students beyond ABSC 987. May be repeated for credit if the content differs. (Formerly HDFL 999.) Prerequisite: Graduate standing in behavioral psychology or instructor permission. THM

Art History
See History of Art.

Astronomy
See Physics and Astronomy.

Atmospheric Science
See Physics and Astronomy.

Biochemistry
See Biological Chemistry: Molecular Biosciences.

Biological Sciences
Haworth Hall, 1200 Sunnyside Ave., Room 2045 Lawrence, KS 66045-7534, www.biology.ku.edu, (785) 864-4301

The Division of Biological Sciences includes the Departments of Ecology and Evolutionary Biology and Molecular Biosciences. It 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 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 2041 Lawrence, KS 66045-7534, www2.ku.edu/~eeb, (785) 864-3645
Graduate Adviser: Bryan Foster, bfoster@ku.edu, 2041 Haworth Hall, (785) 864-4361
Graduate Program Coordinator: Jaime Keeler, jrkeeler@ku.edu, 2041C Haworth Hall, (785) 864-2362


Courtesy Professors: Burg, Busby, Eifler, Freeman, Hagan, Huggins, Kindscher, Lieberman

Adjunct Professors: Crawford, Tourtellot

Professors Emeriti: Armitage, Byers, Coil, Cutler, Duellman, Fitch, Humphrey, Johnston, Lichtwardt, Michener, Schlager, Torres

Associate Professors: deBoer, Dimmick, Engel, B. Foster, Kelly, Mort, Orive, Pierotti, D. Smith, Timm

Associate Professors: deBoer, Dimmick, Engel, B. Foster, Kelly, Mort, Orive, Pierotti, D. Smith, Timm

Graduate Pr

Graduate Pr

Graduate Pr
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 laboratories are in Dyche Hall, Public Safety Building, McGregor Herbarium, and Haworth Hall. Museum collections are part of the Biodiversity Institute and include nearly 1 million vertebrate specimens, an estimated 1 million invertebrate fossils (excluding microfossils), 3.2 million pinned insects, and numerous preserved mites and minute insects. The Biodiversity Institute 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 Fitch 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 and South Africa.

Admission
General information on admission and financial aid is available online at www2.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 or on the International English Language Testing System. Faculty recommendations, honors, awards, undergraduate research experience, publications, and professional experience are considered.

Motivation, enthusiasm, and realistic career goals as evidenced by the applicant’s essay are particularly important. Students must have a faculty sponsor before admission. Applicants are encouraged to correspond with one or more potential sponsors when they apply. The number of students admitted is limited. Qualified candidates may be denied admission because of lack of a faculty sponsor, financial support, or research facilities. The master’s degree is not a prerequisite for entering a Ph.D. program.

Submit your application online at www2.ku.edu/GAPC. Send transcripts of all completed college and university course work to

The University of Kansas
Graduate Application Processing Center
Strong Hall, 1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

Send all other requested application materials to
The University of Kansas
Department of Ecology and Evolutionary Biology
Haworth Hall, 1200 Sunnyside Ave., Room 2041
Lawrence, KS 66045-7534

M.A. Degree Requirements: Ecology and Evolutionary Biology, Botany, or Entomology

Two options leading to the Master of Arts are offered. The student and the advisory committee determine the precise requirements for both.

Options I (Thesis) and II (Nonthesis). Option I is research oriented and requires a thesis or its equivalent. Option II emphasizes broader graduate training rather than concentration on research. For each option, the M.A. committee must have at least three graduate faculty members, two of whom must be in EEB. No faculty member outside the department is required.

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 nonthesis research may count toward the 30 hours. Completion 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. Students must take a graduate-level course in statistics (or have equivalent knowledge) and graduate-level courses in ecology, evolution, and systematics.

2. A thesis on original research.

3. Acceptable presentation of research results in the 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. Students must take a graduate-level course in statistics (or have equivalent knowledge) and graduate-level courses in ecology, evolution, and systematics.

2. Passing a general examination in the candidate’s major subject.

3. Completion of a written report summarizing the research problem.

General Examination. Students working toward the M.A. degree (both thesis and nonthesis options) must take a general examination in the semester of final enrollment in course work when the thesis work (or library investigation, etc.) is nearing completion. This examination is administered by three members of the Graduate Faculty, two of whom must be in EEB, and should not be taken on the same day as the student’s research presentation. The general examination is not a defense of the thesis, although questions may arise directly or indirectly related to the student’s research. Its structure is similar to the Ph.D. comprehensive oral examination, although the length of the examination and depth and breadth of knowledge required is less than that expected at a Ph.D. examination. To pass the examination, a student must receive a majority of passing votes from the examining committee.

Research. Upon completion of their work, students in M.A. Option I must submit a thesis on original research and hold an acceptable presentation of their research results to the public in standard departmental colloquium format. Students in M.A. Option II must work with one or more faculty members on a research problem that requires use of literature, laboratory, or field techniques. They must submit a comprehensive written report approved by the advisory committee. Examples include a literature review of a critical issue in a scientific discipline, original research, or other creative activity approved by the advisory committee.

Additional Requirements for the M.A. in Entomology. In addition to EEB requirements, students seeking the M.A. in entomology must take BIOL 500 Biology of Insects and BIOL 502 Laboratory in Insect Biology and Diversity unless they have taken equivalent courses. Students who have taken a course equivalent to BIOL 502 are still encouraged to take BIOL 502 to familiarize themselves with the local insect fauna. Students
also must take at least one of the following courses: BIOL 708 External Morphology of Insects, BIOL 711 Insect Systematics, or BIOL 716 Insect Physiology and Internal Morphology.

**Additional Requirements for the M.A. in Botany.** In addition to EEB requirements, students seeking the M.A. in botany must take a graduate-level course in at least two of following three areas: (1) plant ecology, (2) plant systematics or morphology, (3) plant development or physiology.

**Ph.D. Degree Requirements: Ecology and Evolutionary Biology, Botany, or Entomology**

All degree aspirants should have broad backgrounds in biology, including genetics, morphology/anatomy, physiology, ecology, evolution/population biology, and systematics. Deficiencies may be corrected by course work.

**Requirements.** In addition to general requirements, the basic requirements for the Ph.D. degree include the following:

- **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. In their first semester, EEB graduate students must enroll in and attend one semester of a major subject, such as an Ecology and Evolutionary Biology Colloquium. They also are expected to attend departmental colloquia in subsequent semesters. Students must take a graduate-level course in statistics (or have equivalent knowledge) and at least one graduate-level course in systematics. Students must be required to take courses specified by the committee at the beginning of the degree program.

- **Fulfillment of the Foreign Language or Other Research Skills requirement:**
  1. **(a) Exhibit reading knowledge of two foreign languages.** Students without prior experience must enroll in a 3-hour reading course in a modern language other than English, which they are expected to pass by the end of their first semester. The requirement for reading knowledge of one foreign language is determined by an EEB faculty member or (an appropriate language department faculty member) who is fluent in the language. The faculty member indicates fluency by submitting a letter to the graduate committee.
  2. **(b) Exhibit fluency in one foreign language.** If the student is a native English speaker, or if a student who is not a native English speaker chooses a language other than English, fluency in reading, writing, and speaking a foreign language is determined by an EEB faculty member or (an appropriate language department faculty member) who is fluent in the language. The faculty member indicates fluency by submitting a letter to the graduate committee.
  3. **(c) Exhibit reading knowledge of one foreign language and fulfill the requirements for one other research skill (see d, below).**
  4. **(d) Fulfill the requirements for two other research skills.** Other research skills must meet the expectation of a "research skill component distinct from, but strongly supportive of, the dissertation." A student should identify a skill that meets this definition and successfully complete a course principally associated with that skill and/or complete a substantial project involving that skill. Students with no prior experience might consider those recommended by the department. Students with prior experience might choose to develop a project. A qualified faculty member must approve the choice of project. Upon completion, a letter that describes the project, signing faculty, and the department chair becomes part of the student's permanent record. Examples of previously approved other research skills are listed in the EEB Graduate Student Handbook.

- **Students who wish to use different courses or develop projects in different areas than those previously approved must petition the graduate committee to approve the course or project and to identify an appropriate faculty member to oversee the project. The petition must provide evidence that the effort involved is similar to the options listed in the EEB Graduate Student Handbook.**

A written dissertation proposal submitted to the comprehensive oral examination committee at least two weeks before the examination. An approved version of the proposal should be placed in the student's permanent file. The student and adviser determine the format, with the former cultivating the dissertation proposal which is limited to eight single-spaced pages including tables and figures.

**Successful completion of a comprehensive examination qualifying the student for candidacy for the Ph.D.** The comprehensive oral examination committee must consist of at least two EEB graduate faculty members, and one must be from another KU department representing Graduate Studies. Non-KU faculty may be appointed ad hoc members of the Graduate Faculty. The major adviser may participate and vote in the comprehensive oral examination. A majority vote of the committee is required for the student to pass the examination. If the vote of at least 80 percent of the committee members must judge the student's performance to be exceptional. An exceptional performance would be one that is judged to be in the top 10 percent of examinations in which the committee members have participated.

If a student fails the comprehensive examination, another examination may be scheduled, but under no circumstances may a student take it more than three times. The examination may not be repeated until at least 90 days after a previous unsatisfactory attempt.

At least two semesters of teaching experience or other approved experience. See the EEB Graduate Student Handbook for more information.

A dissertation in English based on the results of original research must be submitted and approved. Dissertations may be presented in publishable form, designed for a regular departmental colloquium series. The preparation of the oral defense examination must be approved by the advisory committee. The general regulations concerning the preparation of the thesis or dissertation also must be met.

At passing the comprehensive oral examination, the student in consultation with the adviser selects a dissertation committee. The committee must consist of at least three Graduate Faculty members, typically the adviser and two other faculty members with complementary research interests. Near the completion of the student's research, the student and adviser select two more members to form the final oral examination committee. All members must belong to the Graduate Faculty, with three from EEB and one must be from another KU department. Non-KU faculty may be appointed ad hoc members of the Graduate Faculty.

All five members should read and comment on the dissertation. Three of the five members are designated readers and provide a more detailed review. The student should provide drafts of the dissertation for review and revision by committee members before scheduling the defense. The dissertation should meet general formatting requirements and contain a comprehensive discussion of the dissertation. The dissertation and dissertation defense should be scheduled at least three weeks before the final examination. The committee must consist of at least three graduate faculty members, typically the adviser and two other faculty members with complementary research interests. Near the completion of the student's research, the student and adviser select two more members to form the final oral examination committee. All members must belong to the Graduate Faculty, with three from EEB and one must be from another KU department. Non-KU faculty may be appointed ad hoc members of the Graduate Faculty.

A majority vote of the committee is required for the student to pass the examination. If the vote of 80 percent of the committee must agree to award a student Honors. Both the dissertation and the presentation are considered in the decision. After passing the final oral examination, the student should make any corrections required.

Additional requirements for a Ph.D. in entomology. In addition to EEB requirements, students seeking the Ph.D. in entomology must take BIOL 5010 Biology of Insects and BIOL 502 Laboratory in Insect Biology and Diversity unless they have taken equivalent courses. Students who have taken a course equivalent to BIOL 502 and have equivalent knowledge may be awarded credit only for the top 10 percent of examinations in which the committee members have participated. The dissertation and dissertation defense should be scheduled at least three weeks before the final examination. At least five months must have elapsed between successful completion of the dissertation and the date of the final oral examination. At this time, the dissertation and dissertation defense should be scheduled at least three weeks before the final examination. At least five members must have earned a Ph.D. from another KU department. Non-KU faculty may be appointed ad hoc members of the Graduate Faculty.

A majority vote of the committee is required for the student to pass the examination. If the vote of 80 percent of the committee must agree to award a student Honors. Both the dissertation and the presentation are considered in the decision. After passing the final oral examination, the student should make any corrections required.

At least two semesters of teaching experience or other approved experience. See the EEB Graduate Student Handbook for more information.

Additional requirements for a Ph.D. in botany. In addition to EEB requirements, students seeking the Ph.D. in botany must take a graduate-level course in each of the following areas: (1) plant ecology, (2) plant systematics or morphology, (3) plant development or physiology. In addition, the student must take a specialty seminar focusing on a plant-related topic.

**Time Limits**

Consult general requirements 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.

**Biological Sciences: Molecular Biosciences**

Chair: Kathy Suprenant, ksupsr@ku.edu

Haworth Hall, 1200 Sunnyside Ave., Room 2034

Lawrence, KS 66045-7534

www.molecularbiosciences.ku.edu, (785) 864-4631

Graduate Director: Erik Floor, floor@ku.edu, 5057 Haworth Hall, (785) 864-4321

Graduate Program Coordinator: John P. Connolly, jconnolly@ku.edu, 3043 Haworth Hall, (785) 864-4311

Professors: Brown, Cohen, Dentler, Draper, Kelly, Kuczera, Orr, Picking, Richter, Suprenant, Takusagawa, Vaske, Weaver

Professors Emeriti: Borchert, Buller, Burton, Himes, Kitos, Sanders, Schoven, Shankel, Wyettenbach, Yochim

Associate Professors: Benedic, Buchner, Corbin, Egan, Floor, Gegenheimer, Lundquist, Stetler, Yamshchikov

Consult general requirements 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.
Assistant Professors: Ackley, Azuma, Davido, DeGuzman, Gamblin, Harsay, Hays, Hefty, Im, Lamb, Macdonald, Neufeld, Tang, Timmons, Ward, Zhang

Affiliated Faculty: Dobrowsky, Faiman, Gleason, Hesse, Limburg, E. Michaelis, M. Michaelis, Mure, Schönbrunn, Yang

The department offers master’s and Ph.D. degrees in 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, the graduate director advises him or her. Students assigned a particular faculty adviser should arrange their course schedules with that adviser.

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, minimum requirements. A student must enroll full time in residence for at least two regular academic-year semesters after the first year of graduate study. Nine credit hours constitute full-time enrollment. If the student holds a half-time research or teaching assistantship, 6 hours constitute full-time enrollment. The department expects graduate students who have not yet passed the comprehensive 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 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 annually. 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 two semesters, a new Ph.D. graduate student follows a rotation schedule through three research laboratories. Master’s students must have at least one laboratory rotation. This program acquaints each student with the research conducted by each faculty member. Students then choose a home lab. This decision must be mutually agreed upon with the major professor. Each graduate student must teach in the laboratory sections of formal courses for at least two semesters.

Admission

The department adheres to 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.

Laboratory space, financial resources, grants, and the number of students leaving the program largely determine the number of students entering the program each year. The department usually maintains a full enrollment.

The departmental Web site, www.molecularbiosciences.ku.edu has information about application procedures. You may apply directly online. Applications must include (1) a completed application form; (2) one copy of all academic transcripts (international students must provide one copy in English and one in the native language); (3) a one- to two-page résumé; (4) Graduate Record Examination scores (the general test is required and the subject test is recommended in biochemistry, cell and molecular biology; biology; or chemistry; GREs must have been taken within two years of the initial semester); (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 Admissions in the General Information chapter of this catalog).

All files must be complete and received by the graduate program assistant by January 15 each year. First consideration is given to those who meet this deadline. Applicants are informed of decisions after February 15.

Submit your application online at www.graduate.ku.edu/GAPC. Send transcripts of all completed college and university course work to

The University of Kansas
Graduate Application Processing Center
Strong Hall, 1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

Send all other requested application materials to

The University of Kansas
Department of Molecular Biosciences
Haworth Hall, 1200 Sunnyside Ave., Room 2034
Lawrence, KS 66045-7534

M.A. Degree Requirements

General Requirements for All M.A. Students. Refer to each discipline for specific course requirements. General requirements include (1) a minimum of 30 hours of graduate credit; (2) a minimum of one laboratory rotation during the first semester of graduate study; (3) enrollment each semester in BIOL 701 Topics in: Molecular Biosciences Seminar; (4) completion of the following courses: BIOL 807 Molecular Biosciences I, BIOL 808 Molecular Biosciences II, and BIOL 818 Techniques in Molecular Biosciences; (5) a graduate committee established by the beginning of the spring semester of the first year; (6) a minimum of one annual graduate committee meeting until completion of the degree. The following thesis options are available:

1. Write a thesis resulting from original research on a laboratory problem.
2. Publish a research paper in a national, refereed journal.

Acceptance of the paper for publication constitutes publication for conferral of the degree.

3. Write a library thesis on a topic approved by the student’s graduate committee.

Specific M.A. Requirements: Biochemistry and Biophysics. All of the following courses are required: BIOL 772 Gene Expression, BIOL 750 Advanced Biochemistry, 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. At least three graduate courses are required, selected from BIOL 811 Advanced Molecular and Cellular Immunology, BIOL 812 Mechanisms of Host-parasite Relationships, BIOL 813 Advanced Bacterial Physiology, BIOL 814 Advanced Molecular Virology, BIOL 815 Advanced Molecular Genetics; plus electives to satisfy the 30-hour course requirement. No more than 6 of these hours can be below the 700 level. Electives are determined in consultation with the graduate adviser and graduate committee.

Specific M.A. Requirements: Molecular, Cellular, and Developmental Biology. All of the following courses are required: BIOL 755 Mechanisms of Development, BIOL 752 Cell Biology, and either BIOL 753 Advanced Genetics or BIOL 772 Gene Expression, 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 Ph.D. Students. All general requirements must be fulfilled. Refer to each discipline for specific course requirements. General requirements include (1) at least three individual laboratory rotations during the first two semesters of graduate study; (2) enrollment each semester in BIOL 701 Topics in: Molecular Biosciences Seminar; (3) completion of the following courses: BIOL 807 Molecular Biosciences I, BIOL 808 Molecular Biosciences II, and BIOL 818 Techniques in Molecular Biosciences; (4) a FLORS requirement (satisfied by completion of BIOL 818); (5) a minimum of two semesters of graduate teaching; (6) a graduate committee established before the beginning of the fall semester of the second year; (7) a minimum of one annual graduate committee meeting; (8) a written preliminary examination in the form of a research proposal completed by the end of the spring semester of the second year of graduate study (BIOL 925); (9) a comprehensive oral examination held no later than October 1 of the fall semester of the third year of graduate study (successful completion of the comprehensive oral examination admits the student to candidacy for the Ph.D. degree); (10) a dissertation based on original research presented to the dissertation examination committee for evaluation and presented and defended in a formal public lecture; and (11) completion of the degree in seven years.

First-year Curriculum for All Students. The minimum number and types of first-year courses include BIOL 701 Topics in: Molecular Biosciences Seminar (enrollment required each semester); laboratory rotations (fall and spring semester); and BIOL 807 Molecular Biosciences I, BIOL 808 Molecular Biosciences II, and BIOL 818 Techniques in Molecular Biosciences.

Specific Ph.D. Requirements: Biochemistry and Biophysics. Refer to the first-year curriculum above. All of the following courses are required: BIOL 750 Advanced Biochemistry, BIOL 901 Graduate Seminar in Biochemistry and Biophysics (one semester), BIOL 918 Modern Biochemical and Biophysical Methods, and BIOL 952 Introduction to Molecular Modeling. The graduate committee may recommend that additional courses be taken.

Specific Ph.D. Requirements: Microbiology. Refer to the first-year curriculum above. At least four of the following five graduate courses are required: BIOL 811 Advanced Molecular and Cellular Immunology, BIOL 812 Mechanisms of Host-parasite Relationships, BIOL 813 Advanced Bacterial Physiology, BIOL 814 Advanced Molecular Virology, BIOL 815 Advanced Molecular Genetics. The graduate committee may recommend that additional courses be taken.

Specific Ph.D. Requirements: Molecular, Cellular, and Developmental Biology. Refer to the first-year curriculum above. The following courses are required: BIOL 755 Mechanisms of Development, BIOL 752 Cell Biology; and either BIOL 753 Advanced Genetics or BIOL 772 Gene Expression. The graduate committee may recommend that additional courses be taken.

Biological Sciences Courses

Courses by Topics

Anatomy and Histology
- BIOL 510 Comparative Anatomy
- BIOL 561 Histological Technique
- BIOL 606 Developmental Plant Anatomy
- BIOL 640 The Biology and Evolution of Fossil Plants
- BIOL 641 Laboratory in Paleobotany
- BIOL 708 External Morphology of Insects
- BIOL 716 Insect Physiology and Internal Morphology

Biochemistry
- BIOL 600 Introductory Biochemistry, Lectures
- BIOL 636 Biochemistry I
- BIOL 637 Introductory Biochemistry, Laboratory
- BIOL 638 Biochemistry II
- BIOL 639 Advanced Biochemistry Laboratory
- BIOL 672 Gene Expression
- BIOL 688 The Molecular Biology of Cancer
- BIOL 718 Laboratory in Molecular Biology
- BIOL 750 Advanced Biochemistry
- BIOL 756 Cell and Tissue Culture Laboratory
- BIOL 768 Plant Molecular Biology
- BIOL 770 Plant Biochemistry
- BIOL 772 Gene Expression
- BIOL 775 Chemistry of the Nervous System
- BIOL 807 Molecular Biosciences I
- BIOL 808 Molecular Biosciences II
- BIOL 815 Techniques in Molecular Biosciences
- BIOL 901 Graduate Seminar in Biochemistry and Biophysics
- 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 640 The Biology and Evolution of Fossil Plants
- BIOL 641 Laboratory in Paleobotany
- BIOL 742 Plant Population Biology
- BIOL 751 Plant Communities of North America
- BIOL 767 The Vegetation of the Earth
- BIOL 770 Plant Biochemistry
- BIOL 901 Graduate Seminar in Biochemistry and Biophysics
- BIOL 911 Research Topics in Plant Physiology and Biochemistry
- BIOL 968 Seminar in Vegetation Geography

Cell and Developmental Biology
- BIOL 590 Principles of Embryology
- BIOL 688 The Molecular Biology of Cancer
- BIOL 710 Insect Development

The Biodiversity Institute studies the life of the planet for the benefit of the earth and its inhabitants, documenting the fantastic diversity of life on earth, uncovering its intricate patterns, telling the grand stories that emerge, and educating the next generation of biodiversity scientists.

KU’s 590-acre Fitch Natural History Reservation is a nature preserve that has been protected from disturbance for 60 years.
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<th>Course Title</th>
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<td>BIOL 662 Aquatic Ecology Laboratory</td>
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<td>BIOL 667 Chemical Communication in Sex, Feeding, and Fighting</td>
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<td>BIOL 714 Community and Ecosystem Ecology</td>
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<td>BIOL 712 Population Biology</td>
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<td>BIOL 713 Plant Communities of North America</td>
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<td>BIOL 782 Principles of Biogeography</td>
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<td>BIOL 786 Fundamentals of Tropical Biology</td>
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<td><strong>Entomology</strong></td>
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A KU professor, with the help of a co-worker, made the 1981 discovery of a white-headed flightless steamer duck, the first species of duck found since 1917.

Two KU professors have been studying the spread and adaptation of the African honeybee in South America.

The R.L. McGregor Herbarium houses approximately 350,000 plant specimens, a library of 1,400 books and 14,000 scientific articles, and a collection of 14,000 photographic slides.
Biological Sciences Courses

**BINF 701 Bioinformatics I (5).** First semester of a two-semester course in bioinformatics and computational biology. Topics include basic concepts of bioinformatics and molecular modeling, bioinformatics databases, computational tools and modeling methods, protein sequence and structure alignment, conformational analysis, secondary structure determination, tertiary structure modeling (homology, threading, ab initio, molecular dynamics and Monte Carlo simulations, protein folding and dynamics), as well as students presentations of material from current papers in the field of study and their own on-going research for discussion and critique. Prerequisite: College introduction to biochemistry (no requirement for specific courses), math, and computer courses or concurrent enrollment in such courses and consent of instructor. LEC

**BINF 702 Bioinformatics II (5).** Second semester of a two-semester course in bioinformatics and computational biology. Topics include protein quaternary structure modeling, protein-protein/DNA/small ligand docking, binding, computer-aided drug design, protein structure-function relationships, biological membranes (structure and function of integral membrane proteins, protein-membrane and protein-protein interactions in membranes), phylogenetic trees, modeling of genome-wide protein interaction networks based on structure, sequence, experiment and data-mining, as well as students presentations of material from current papers in the field of study and their own on-going research for discussion and critique. Prerequisite: BINF 701. LEC

**BINF 709 Topics in:** __________ (1-3). Advanced courses on special topics in Bioinformatics, given as need arises, including lectures, discussions, readings, or laboratory. Students may select sections according to their special interests. LEC

Biological Sciences Courses

**BIOL 500 Biology of Insects (3).**

**BIOL 502 Laboratory in Insect Biology and Diversity (2).**

**BIOL 503 Immunology (3).**

**BIOL 504 Immunology Laboratory (2).**

**BIOL 505 Social Insects (3).**

**BIOL 506 Pathogenic Microbiology (3).**

**BIOL 507 Pathogenic Microbiology Laboratory (2).**

**BIOL 509 Biology of Spiders (2).**

**BIOL 510 Comparative Anatomy (5).**

**BIOL 511 Biology of Spiders Laboratory (1).**

**BIOL 512 General Virology (3).**

**BIOL 513 Virology Laboratory (2).**

**BIOL 514 Principles of Ecology, Honors (3).**

**BIOL 516 Microbial Physiology (3).**

**BIOL 517 Microbial Physiology Laboratory (2).**

**BIOL 518 Microbial Genetics (3).**

**BIOL 519 Microbial Genetics Laboratory (2).**

**BIOL 525 Aquatic Entomology (5).**

**BIOL 533 Biology of Fungi (4).**

**BIOL 536 Cell Structure and Function, Honors (3).**

**BIOL 540 General Invertebrate Zoology (4).**

**BIOL 545 Evolution of Development (3).**

**BIOL 550 Introduction to Systematics (3).**

**BIOL 555 General Plant Physiology (3).**

**BIOL 561 Histological Technique (2).**

**BIOL 570 Introduction to Biostatistics (3).**

**BIOL 571 Introduction to Biostatistics Laboratory (1).**

**BIOL 583 Herpetology (3).**

**BIOL 590 Principles of Embryology (3).**

**BIOL 592 Ichthyology (4).**

**BIOL 594 Forest Ecosystems (3).**

**BIOL 595 Human Genetics (3).**

**BIOL 599 Senior Seminar:** __________ (1).

**BIOL 600 Introductory Biochemistry, Lectures (4).**

**BIOL 602 Plant Ecology (3).**

**BIOL 603 Systematic Botany (3).**

**BIOL 606 Ecological Plant Physiology (3).**

**BIOL 607 Field and Laboratory Exercises in Plant Ecology (2).**

**BIOL 608 Developmental Plant Anatomy (4).**

**BIOL 609 Current Progress in Microbiology (1).**

**BIOL 610 Plant Kingdom (4).**

**BIOL 611 Molecular Systematics and Evolution (4).**

**BIOL 612 Fundamentals of Microbiology (3).**

**BIOL 613 Biology of Honeybees (3).**

**BIOL 616 Medical Entomology (3).**

**BIOL 620 Physiological Ecology (3).**

**BIOL 622 Paleontology (3).**

**BIOL 623 Paleontology Laboratory (1).**

**BIOL 625 Behavioral Ecology and Sociobiology (3).**

**BIOL 630 Conservation and Wildlife Biology (3).**

**BIOL 636 Biochemistry I (3).**

**BIOL 637 Introductory Biochemistry Laboratory (2).**

**BIOL 638 Biochemistry II (3).**

**BIOL 639 Advanced Biochemistry Laboratory (2).**

**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 650 Advanced Neurobiology (3).**

**BIOL 652 Comparative Animal Behavior (3).**

**BIOL 654 Comparative Animal Behavior, Laboratory (1).**

**BIOL 656 Ecosystem Ecology (3).**

**BIOL 660 Limnology (3).**

**BIOL 661 Stream Ecology (3).**

**BIOL 662 Aquatic Ecology Laboratory (2).**

**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 672 Gene Expression (3).**

**BIOL 673 Cellular and Molecular Neurobiology (3).**

**BIOL 676 Mammalian Neuroanatomy (5).**

**BIOL 688 The Molecular Biology of Cancer (3).**

**BIOL 690 Control Mechanisms in Development (3).**

**BIOL 692 Developmental Genetics (3).**

**BIOL 694 The Art of Becoming a Professional Scientist (3).**

**BIOL 695 Animal Communication and Sensory Ecology (3).**

**BIOL 699 Divisional Honors Research Colloquium (1).**

**BIOL 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 the changing practices regarding conservation techniques. Emphasis will be placed on detection and identification of causes of deterioration in objects made of organic and inorganic materials, and how these problems can be remedied. Storage and care of objects will also be considered. (Same as AMS 714, GEOL 780, HIST 722 and MUSE 706.) Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC

**BIOL 701 Topics in:** __________ (1-3). Advanced courses on special topics in biology, given as need arises. Lectures, discussions, readings, laboratory, or field work. Students may select sections according to their special interests. LEC

**BIOL 702 Laboratory Practice: Radiation Safety Procedures (0.75). An introduction to the basic properties of radioisotopes, and the fundamental safety practices needed for the safe use of low levels of radioactive materials. Risks associated with radiation exposures and applicable state and federal regulations are discussed. (Normally the content of the first ten hours of BIOL 703.) Prerequisite: Senior standing in one of the sciences. LAB

**BIOL 703 Radiosotopes and Radiation Safety in Research (1.25). An introduction to the properties of radioactive materials, radiations, and their interaction with matter, methods of radiation detection and measurement, protective measures, applicable state and federal regulations, design and implementation of safety management systems in the research laboratory, design of tracer experiments, and the risks associated with radiation exposure. Prerequisite: BIOL 702 or concurrent enrollment in BIOL 702, algebra and two semesters of either physics or chemistry. LEC

**BIOL 704 Research Animal Methods (3). Lectures, discussions, and laboratory sessions. Selection of proper animal models for specific research studies. Various external influences that alter research data. Routine techniques including restraint, sample collection, injection, anesthesia and euthanasia. Prevention and handling of common research animal problems or diseases. Proper and humane animal care as defined by the Federal Animal Welfare Act. Prerequisite: Senior or graduate standing in one of the biological sciences or permission of instructor. LEC

**BIOL 706 Current Trends in Curation and Collection Management (2). Seminar course to provide students with a working knowledge of the primary issues and current trends in building, administration, and care of scientific collections. Topics include permits, collecting, accessioning, cataloging, preservation, preventive conservation, and access to collections and data. The course format consists of readings, lectures, guest speakers, discussions, and visits to scientific collections on campus. (Same as MUSE 710.) LEC

**BIOL 708 External Morphology of Insects (4). A study of external structure common to all insect orders, with detailed comparative laboratory studies of representative species. Prerequisite: BIOL 500, BIOL 502 or equivalent, or permission of instructor. LEC

**BIOL 709 Immature Insects (2). The classification, structure, and ecological distribution of immature insects, especially larvae of Holometabola. Prerequisite: BIOL 502 and consent of instructor. LEC

**BIOL 710 Insect Development (3). A study of the embryonic and postembryonic development of insects. Emphasis is placed on developmental physiology of the early embryonic stages, the morphogenesis of organ systems, and the action of hormones in postembryonic development. Laboratory includes demonstrations and histological and experimental work. Prerequisite: Consent of instructor or BIOL 500. LEC
BIOL 711 Insect Systematics (4). A study of the diversity of insects, including the classification and identification of major orders; families on the basis of external morphology. The biology, ecology, phylogeny, and geological history of each order will be covered. Includes both lectures and laboratory exercises. Prerequisite: BIOL 500, BIOL 502 or equivalent, or permission of instructor. LEC

BIOL 712 Evolutionary Biology—Graduate (3). A thorough survey of evolutionary biology. Topics include: natural selection, population genetics, speciation, adaptation, speciation, coevolution, macroevolution, the comparative method, and the history of life. Prerequisite: BIOL 350 or equivalent or consent of instructor. LEC

BIOL 713 Community and Ecosystem Ecology (3). Study of factors determining distribution and abundance of organisms, energy flow in ecosystems, and the 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 Plant Communities of North America (3). Phylogenetic and floristic analysis of the vegetation, with emphasis on the Southeast; 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 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 725 Principles of Systematics (3). A series of seven laboratory modules emphasizing the practical and theoretical use of light microscopes and scanning and transmission electron microscopes. A variety of approaches using light microscopy, including bacterial size, fluorescent, polarizing, 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 (3). 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 on the use of inks and inks 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 724 Insect Morphology (3). A lecture and laboratory class emphasizing the theoretical and practical use of light microscopes and scanning transmission electron microscopes. A variety of approaches using light microscopy, including bacterial size, fluorescent, polarizing, 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 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 further expanded by discussion of the current literature. Prerequisite: BIOL 416 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, and recombination on population structure, and the study 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 qualitative methods and experimental analysis. Each module requires data collection analysis, and written interpretation. Modern instrumentation, including use of microcomputers, is emphasized. Topics include ecological modeling, ecological genetics, physiological ecology, community structure, mating and reproduction and sexual behavior. 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 systematics and evolutionary theory, particularly the origins of asymmetric diversity patterns, macroevolution, adaptation, speciation, and the role of higher taxa; roles of paleontological, ontogenetic, biochemical, and molecular data in systematics; and biogeography. Laboratory work: practical applications of nomenclature, development of keys, descriptions and systematic revisions, character analysis, phylogeny reconstruction, hypothesis testing, interpretation of biogeographic patterns. (Three hours lecture and three hours laboratory per week) Prerequisite: BIOL 226 or equivalent. Intended 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 quantitative theories. Prerequisite: BIOL 404 or BIOL 412 or equivalent and a course in statistics. LEC

BIOL 749 Topics in Stable Isotopes in the Natural Sciences; (2-3). Isotopic compositions of substances provide powerful insights into many topics in the natural sciences. Applications of isotopic analyses of carbon, hydrogen, oxygen, and nitrogen to selected research topics such as plant resource use, food web analysis, paleoecology, paleoecological reconstructions, hydrology, and soils will be examined. Knowledge of isotopic analyses is not necessary, but a general understanding of potential applications 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 be used to discuss the cellular functions of these molecules. The application of structural and dynamical principles to biological membranes and their function will also be discussed. Prerequisite: BIOL 807 and BIOL 808, a general biochemistry course, or permission of instructor. LEC

BIOL 751 Plant Communities of North America (3). Phylogenetic and floristic analysis of the vegetation, with emphasis on the Southeast; 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 biology. Prerequisite: BIOL 807 and BIOL 808, or BIOL 416 or BIOL 536, or permission of instructor. LEC

BIOL 753 Advanced Genetics (3). An advanced course in modern genetic analysis of eukaryotes. Course material will consist mainly of primary literature in the field of genetics. Topics covered include: genome structure and genome projects; nature of mutations; mutant analysis; genetic recombination and mapping; analysis of gene function; genetic buffering; RNAi and epigenetics; and the genetics of model organisms. Course is open to graduate students in genetics and Genetics programs. Prerequisite: BIOL 807 and BIOL 808, or a course in genetics and a course in biochemistry, or permission of the instructor. LEC

BIOL 754 Brain Diseases and Neurological Disorders (3). Major brain diseases and disorders such as Huntington’s Disease, Alzheimer’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 paper assigned by the instructor to the class in addition to the oral presentation. May be repeated for all the students enrolled. Prerequisite: BIOL 150, or consent of instructor. LEC

BIOL 755 Mechanisms of Development (3). Molecular aspects of differentiation gene function, signal transduction, and cell polarity in the regulation of morphogenesis. Prerequisite: BIOL 754, BIOL 807, or BIOL 808, or BIOL 850 or equivalent, or permission of instructor. LEC

BIOL 756 Cell and Tissue Culture Laboratory (3). An introduction to current laboratory methods of cell and tissue culture, intended to provide an understanding of and substantial experience in several aspects of animal cell growth, cell synchrony, cell nutrition, the production and selection of mutant cells, the production and use of heterokaryons and interspecific hybrids, cell transformation in vitro, the cultivation and characterization of differentiated cells in culture, enzyme induction, and cell karyotyping. LAB

BIOL 757 The Vegetation of the Earth (3). A discussion of the world’s vegetation in its natural and man-altered states. 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 or BIOL 807 or equivalent, 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 prokaryotic and eukaryotic cells. Emphasis on the regulation of gene expression and protein biosynthesis. This course meets concurrently 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 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 CHEM 775, MDM 775, and P&TX 775.) Prerequisite: BIOL 600 or equivalent or consent of instructor. LEC

BIOL 777 Integrative and Developmental Neurobiology (3). Cellular processing of neural information both at the local and in long distance integration. Local computing functions, and integration of these 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 vertebrate and invertebrate animals will be presented, as will determinants of brain sexual dimorphism. Prerequisite: An upper level course in physiology or BIOL 520. LEC

BIOL 780 Fisheries (2). Philosophy and practice of conservation as it applies to major world fisheries. Species principally utilized, factors affecting production, methods for appraisal and management of stocks. Historical and prospective roles of the fisheries in relation to food supplies for man. Prerequisite: BIOL 412 or equivalent. 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 factors that have affected the occurrence of plants and animals in the community patterns; lectures, readings, discussions. A course in systematics and a course in ecology are recommended. LEC

BIOL 783 Herpetology (3). N A study of amphibians and reptiles. This lecture course will explore the taxonomic diversity of amphibians and reptiles, and cur-
BIOL 784 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, GEOL 784, HIST 721, and MUSE 785.) 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. Prerequisites are not limited using, as appropriate, case studies and a simulated museum organization model. (Same as AMS 731, GEOL 783, HIST 728, and MUSE 701.) Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC

BIOL 786 Fundamentals of Tropical Biology (1-8). The tropical environment and biota; ecological relations, communities and evolution 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. Lectures will focus on issues involved in developing and producing museum exhibits. Laboratory exercises will provide first-hand experience with basic preparation techniques. Emphasis will be placed on the management of an exhibit from initial concept to design and small-scale model to the major exhibits. (Same as AMS 700, 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 potentials as research, education, and public service institutions responsible for collections of natural and cultural objects. (Same as AMS 720, GEOL 782, HIST 720, and MUSE 702.) Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC

BIOL 789 Field Course in Entomology (1-6). Field experiences in various habitats, with an emphasis in ecology, systematics, behavior, and collection techniques. FLD

BIOL 790 Paleontology of Lower Vertebrates (3). General account of the osteology, geological distribution, and evolution of the principal groups of fishes, amphibians, and reptiles. 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. Lecture topics include the structure and function of the various systems, and adaptation 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. Research paper using primary scientific literature is required. 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 Principles and Practices of Museum Collection Management (3). Lecture, discussion, and laboratory exercises on the nature of museum collections, their associated data, and their use in scholarly research; cataloging, storage, fumigation, automated information management and related topics will be presented for museums of art, history, natural history and anthropology. (Same as AMS 730, 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, 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 723, HIST 799, and MUSE 799.) LFL

BIOL 801 Topics in (1-3). Advanced courses on special topics in biology, given as need arises. Lectures, discussing laboratories, reading or field work. Students may select sections according to their special interests. LEC

BIOL 802 The Art of Becoming a Professional Scientist (3). Discusses aspects of graduate education that are directed at the post Ph.D. phases of a career, but that must be initiated early in the graduate student program of study. One 3-hour discussion per week. LEC

BIOL 806 Major Patterns in Insect Evolution (3). Extensive reading and discussion of the 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 genetic expression. Prerequisite: Consent of instructor. LEC

BIOL 807 Molecular Biosciences I (3). An introduction to the advanced study of biochemistry and microbiology for all Molecular Biosciences graduate students. Topics can include macromolecular structure, metabolism, kinetics and thermodynamics, bioinformatics, and pathogenic host-virus interactions. Prerequisite: Admission to the graduate program in Molecular Biosciences, or consent of instructor. LEC

BIOL 808 Molecular Biosciences II (3). An introduction to the advanced study of genetics, cell and developmental biology, and neurobiology for all Molecular Biosciences graduate students. Topics can include prokaryotic and eukaryotic genetics, cellular structure and function, signal transduction, membrane potentials, synaptic transmission, and sensory neurophysiology. Prerequisite: Admission to the graduate program in Molecular Biosciences, or consent of instructor. LEC

BIOL 810 Seminar in Biochemistry (1). Presentation and discussion of specific areas of recent research in biochemistry. This course can be repeated for credit. Prerequisite: Consent of instructor. LEC

BIOL 811 Advanced Molecular and Cellular Immunology (2). Covers recent advances in immunohematology 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 innate immunity in disease states such as hypersensitivity, autoimmunity, and cancer. Prerequisite: BIOL 807 and BIOL 808, or an introductory course in immunology, or consent of instructor. LEC

BIOL 812 Mechanisms of Host-parasite Relationships (2). Emphasis 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 susceptibility to infection. Prerequisite: BIOL 807 and BIOL 808, or a course in biochemistry, or consent of instructor. LEC

BIOL 813 Advanced Bacterial Physiology (2). The intermediary, reactions catalyzed by the bacterial cell during energy-requiring processes. Thermodynamic and kinetic considerations of the processes will be covered. Knowledge of calculus is recommended. Prerequisite: BIOL 807 and BIOL 808, or a course in microbiology and a course in biochemistry, or consent of instructor. LEC

BIOL 814 Advanced Molecular Virology (2). The course concentrates on evaluation of current research strategies in molecular virology. Prerequisites: BIOL 807 and BIOL 808, or a course in microbial genetics and a course in virology, or consent of instructor. LEC

BIOL 815 Advanced Molecular Genetics (2). A literature-based course that covers recent advances in microbial molecular genetics. Topics include transcription, translation, mutagenesis and repair, genetic exchange mechanisms, and regulation of gene expression. Prerequisite: BIOL 807 and BIOL 808, or a course in microbial genetics, or consent of instructor. LEC

BIOL 818 Techniques in Molecular Biosciences (2). This course provides an introduction to common techniques used for research strategies in molecular biology. The course will cover common techniques in cell biology, biochemistry, microbiology, and neurobiology. Information will be presented in lectures and through practical demonstrations. The course is primarily intended for first year graduate students in the Department of Molecular Biosciences. Prerequisite: Consent of instructor. LEC

The Kansas Ecological Reserves offers researchers and educators 3,300 acres of diverse habitats, including tallgrass prairie, oldfield, wetland, forest, successional woods, and land in agricultural management.
The Higuchi Biosciences Center includes the Center for Biomedical Research, dedicated to basic research, and the Centers for BioAnalytical Research, Drug Delivery Research, and Neurobiology and Immunology Research, oriented to needs of the pharmaceutical industry. KU's Department of Chemistry is a worldwide leader in graduate training and research in bioanalytical chemistry.
Assistant Professors: Jackson, M. Johnson, Limburg, Mure, Rubin, Weis

The department’s graduate program, its Ph.D. program in particular, produces graduates with the basic knowledge, skills, and experimental training necessary to enter productive careers in academic, industrial, and government positions. Faculty and graduate students work collegially, not only in the search for new knowledge at the frontiers of chemistry, but also toward the solution of problems of fundamental societal concern. Although the department believes it is essential to provide graduate students with a knowledge base spanning the traditional areas of analytical, inorganic, organic, and physical chemistry, it nurtures its particular strengths in several important research areas at the interface of chemistry and the biological/medical sciences. The Department of Chemistry at KU is a worldwide leader in graduate training and research in bioanalytical chemistry, and its additional interactions with the pharmaceutical and biological sciences have led to strong graduate research programs in diverse areas such as bio-inorganic, bio-organic, and biophysical chemistry. The department also recognizes its central science role by maintaining strong research and Ph.D. programs in areas that interface closely with molecular bio-science, physics, mathematics, and computer science, for example, in drug discovery, 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 are marketable commodities.

The department’s M.S. program is a traditional companion to the Ph.D. program and shares the same goals. It is encouraged for students who prefer a program with less depth and a research thesis project that is manageable in two to four semesters. Although most entering graduate students choose the Ph.D., the most desirable degree for those who wish to work as independent scientists in academic, industrial, or institutional settings, the M.S. serves a useful and essential role for students with other ambitions.

Research support facilities include the Biochemical Research Service Laboratory, Instrumentation Design Laboratory, Mass Spectrometry Laboratory, Molecular Graphics and Modeling Laboratory, Nuclear Magnetic Resonance Laboratory, X-ray Crystallography Laboratory, and Glassblowing Shop. Anschutz Library contains more than 300,000 books and periodicals spanning the fields of chemistry, biochemistry, physics, geology, and pharmacy.

Admission
Prerequisites. Before beginning graduate work, students should complete an undergraduate program that includes 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 application form, one transcript, Graduate Record Examination scores (strongly encouraged), and three recommendations for the program from individuals familiar with the applicant’s academic background and abilities. International applicants must supply scores from the Test of English as a Foreign Language examination and the Test of Spoken English. Applications should be received by April 15 to be considered for fall semester.

To apply, complete the appropriate chemistry department online inquiry form at www.chem.ku.edu/graduate. From there, you will be directed to the online graduate application form at www.graduat.ku.edu/GAPC. Send transcripts of all completed college and university course work to

The University of Kansas
Graduate Application Processing Center
Strong Hall, 1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

Send all other requested application materials to

The University of Kansas
Department of Chemistry
Malott Hall, 1251 Wescoe Hall Dr., Room 2010
Lawrence, KS 66045-7582

Procedure. A committee of departmental faculty members reviews application materials. Admission as a regular graduate student is based on an expectation that the applicant (1) will complete the courses listed in the Prerequisites section before enrollment in the graduate program, (2) will attain a grade-point average of B or higher in chemistry and all other natural science and mathematics courses, and (3) will fulfill general admission requirements. There must also be a favorable evaluation of the other application materials 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, a candidate for the master’s degree must pass an oral thesis defense (examination) administered by a committee of three members of the department’s graduate faculty.

A reading knowledge of a foreign language or a research skill in computer science or electronics techniques is recommended but not required.

Ph.D. Degree Requirements

In addition to completing the same first-year distribution requirement as for the master’s degree, the Ph.D. aspirant must complete all the advanced courses required in the specialization, which are analytical, inorganic, organic, physical, bioanalytical chemistry, or chemical education. The aspirant also must fulfill the following requirements:

1. One of the following foreign language or research skills must be completed:
   - German
   - French
   - Russian
   - Japanese
   (demonstration of reading knowledge in the student’s area of chemistry in the language or demonstration to an interdepartmental committee approved by the department of the student’s ability to use the language effectively in a chemical context)
   - Computer science
   - Electronic techniques
   - 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 years after entering graduate studies (four semesters, not including summers). A grade of Pass is worth 2 points and a Fail is worth 0 points. During the first year only, two borderline or marginal performances may receive 1 point each. Six points must be in the student’s major area, except for students in chemical education, who need 4 points in chemical education and 4 points in the chosen traditional re-
search 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 641 Biological Physical Chemistry Laboratory (2).

CHEM 646 Physical Chemistry I (3).

CHEM 647 Physical Chemistry I Laboratory (2).

CHEM 648 Physical Chemistry II (4).

CHEM 649 Physical Chemistry II Laboratory (2).

CHEM 667 Systematic Inorganic Chemistry (3).

CHEM 668 Advanced Inorganic Chemistry (2).

CHEM 680 Topics in Chemistry (1-5).

CHEM 690 Environmental Chemistry (3).

CHEM 696 Junior/Senior Seminar (1).

CHEM 698 Undergraduate Research Problems (1-6).

CHEM 699 Undergraduate Honors Research (2-6).

CHEM 711 Applied Electronics for Scientists (4). Lecture and laboratory course for chemists and other scientists 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 instruments; signal conversion and optimization techniques. Prerequisite: CHEM 516 or its 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). An introductory graduate level course in analytical chemistry, in which the principles of electrochemistry, spectrophotometry, and instrumental analysis are utilized to solve analytical problems in inorganic, organic, and biochemistry. Prerequisite: Undergraduate determination in analytical chemistry, a year of organic chemistry, and a year of physical chemistry. LEC

CHEM 737 Coordination and Organometallic Chemistry (3). An examination of the basic foundations of coordination 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 747. 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 stereochemistry, stereoselective, regioselective, and elimination reactions; elementary aspects of mechanism; and conformations; an introduction to orbital symmetry control; basic thermodynamics 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, carboxylations, carbanions, carbenes, radicals, excited states, and strained molecules. Prerequisite: CHEM 740. LEC

CHEM 750 Quantum Chemistry and Spectroscopy (3). An introductory study of the application of quantum mechanics to atomic and molecular systems. LEC

CHEM 754 Chemical Kinetics and Dynamics (3). Chemical kinetics and introduction to chemical reaction dynamics. The course consists of two parts: 1) An overview of chemical kinetics including reaction mechanisms and rate laws with applications to unimolecular and bimolecular reactions, catalysis, and energy transfer, and 2) An introduction to reaction rate theory including transition state theory. Marcus electron transfer theory and collision theory. Prerequisite: CHEM 750 or its equivalent. LEC

CHEM 763 Organic Synthesis I (3). A discussion of fundamental reactions for the formation of carbon-carbon bonds, oxidation, reduction, and functional group interconversions. Prerequisite: CHEM 740. LEC

CHEM 765 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 Chemical Thermodynamics (3). A study of the overall concept of chemical equilibrium. A brief introduction to macromolecules, supermolecules, and macromolecular structures as well as a relatively detailed discussion of the chemistry of carbohydrates, lipids, and proteins. (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 in the regular graduate courses. RSH

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 (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. THE

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. Prerequisite: CHEM 737 or equivalent. 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 Analytical Separations (3). An advanced treatment of analytical separations techniques. The theory of separation science will be augmented with discussion of practical aspects of instrumentation and experiment design. Prerequisite: CHEM 731 or its equivalent. LEC

CHEM 906 Advanced Topics in Inorganic Chemistry (2-3). A course covering various special topics in inorganic chemistry. An announcement of course content and prerequisites will be made at the end of the previous semester. This course may be taken more than once. LEC

CHEM 907 Advanced Inorganic Chemistry Colloquium (1). Review of important aspects of inorganic chemistry not covered in regular courses. Open to advanced graduate students. LEC
CHEM 908 Spectrochemical Methods of Analysis (3). Lecture and laboratory course; general concepts of encoding chemical information as electronic signals; utilization of mass spectrometric devices, atomic absorption spectrometry, infrared, ultraviolet, and NMR spectroscopy; correlation of structure with physical properties. Prerequisite: CHEM 731 and CHEM 750. LEC

CHEM 910 Advanced Physical Chemistry Colloquium (1). Colloquia on various topics of current interest are presented by students, faculty, and visiting scientists. Open to advanced graduate students and to those taking CHEM 999. 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 and to those taking CHEM 999. Open to graduate students in other fields. LEC

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 mechanisms of gas and liquid phase reactions, fast reactions in solutions, molecular and nuclear beam reactions, photochemistry, and other areas of current interest will be discussed. Prerequisite: CHEM 752 or its equivalent. LEC

CHEM 914 Computational Methods in Physical Sciences (3). Advanced computer applications in physical science. 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 graduate-level 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 Schroedinger equation, regular molecular motion models, 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 electronic magnetic resonance, rotational, vibrational, vibration-rotation, Raman, and Mossbauer spectroscopy. Prerequisite: CHEM 750 or its equivalent. LEC

CHEM 917 Advanced Statistical Mechanics (3). Advanced equilibrium statistical mechanics, contact with non-equilibrium 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 917.) Prerequisite: CHEM 909 or equivalent. LEC

CHEM 918 Advanced Quantum Chemistry (3). An advanced discussion of the principles and methods of quantum chemistry and recent development of quantum chemistry, including subjects as ab initio atomic and molecular structure calculations, quantum scattering theories, quantum optics, Lie group theoretical methods, and advanced approximation methods, treating 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, microwave spectroscopy, electronic spectroscopy, mass spectrometry, X-ray crystallography, nuclear chemistry, radiation chemistry, high temperature chemistry, biophysical chemistry, irreversible thermodynamics, transport phenomena, scattering theory. Co- or pre-requisite: CHEM 920. Course will be covered as a seminar, given semester in an announce- ment of the course content and prerequisites will be made at the end of the previous semester. This course may be taken more than once. LEC

CHEM 920 Mass Spectrometry (3). An introduction to mass spectrometry. The various ionization techniques and mass analyzers will be discussed, and many examples of different mass spectrometric applications will be introduced. Prerequisites: CHEM 731 or permission of instructor. LEC

CHEM 925 Bioanalysis (3). A course covering important aspects in modern chemical measurement with particular emphasis placed on bioanalysis. This course will survey the modern analytical challenges associated with the ongoing efforts in genomics and proteomics and discuss future trends in methods in instrumentation. Prerequisite: CHEM 731 or permission of instructor. LEC

CHEM 959 Advanced Topics in Analytical Chemistry: (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 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 stereoschemistry. 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 965 Advanced Physical Methods II (3). A detailed consideration of the mechanism features of some important classes of organic reactions. Discussions will include an examination of molecular orbital theory, linear free energy relationships, and acid-base catalysis. Prerequisite: CHEM 742 and one semester of physical chemistry. LEC

CHEM 971 Advanced Topics in Organic Chemistry: (2-4). A discussion of special topics such as chemical reaction theory, stereochemistry, reaction mechanisms, spectroscopy, molecular orbital theory, natural products, photochemistry, polymer chemistry, reactive intermediates, solution kinetics, linear free energy relationships, and spectroscopic methods. One or more topics will be covered in a given semester and an announcement of the course content and prerequisites will be made at the end of the previous semester. This course may be taken more than once. LEC

CHEM 980 Advanced Topics in Chemical Education: (2-3). A course covering special advanced topics in chemical education 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 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 757. LEC

CHEM 994 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 Bioinorganic and Catalytic Chemistry (3). A survey of metalloproteins and metalloenzymes and their structures and functions, including recent advances in biomimetic modeling. Principles and applications of heterogeneous and homogeneous catalytic processes emphasizing catalysis at transition metal centers. LEC

CHEM 999 Postdoctoral Research in Chemistry (1-3). Advanced level research in collaboration with a faculty member involving projects in chemistry or related areas. Prerequisite: Doctoral degree or equivalent in an appropriate related area. RSH

CHEM 999 College Teaching Experience in Chemistry (1). The college teaching experience provided in this course is designed to prepare a student for a career in college teaching. The student will work in a laboratory or lecture course under the supervision of a faculty member. The planning will be done with the adviser in advance of 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: CHEM 716, 2) two semesters as a graduate teaching assistant or doctoral candidate status, and 3) CHEM 980 or permission of the coordinator. LEC

CHEM 999 Doctoral Dissertation (1-10). Research work (either experimental or theoretical) in chemistry for students working toward the Ph.D. degree. THE

Child Language

Director: Mabel L. Rice, mabel@ku.edu

Dole Human Development Center, 100 Sunnyside Ave., Room 3031 Lawrence, KS 66045-7555, www.clp.ku.edu, (785) 864-4570

Graduate Adviser: Susan J. Kemper, skemper@ku.edu, 308BD Dole Human Development Center, (785) 864-0748

Participating Faculty Members: Atchley (Psychology), Auer (Speech-Language-Hearing: Sciences and Disorders), 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), Fioretti (Biostatistics), Gabriel (Linguistics), Greenhoot (Psychology), Jungman (Linguistics), Kemper (Psychology), Loeb (Speech-Language-Hearing: Sciences and Disorders), McCluskey-Fawcett (Psychology), Pye (Linguistics), Rice (Speech-Language-Hearing: Sciences and Disorders), Rosen (Linguistics), Serena (Linguistics), Simpson (Psychology), Storkel (Speech-Language-Hearing: Sciences and Disorders), Vivevich (Psychology), Warren (Institute for Life Span Studies), Professors Emeriti: Hart (Bureau of Child Research, Institute for Life Span Studies), Schiefelbusch (Speech-Language-Hearing: Sciences and Disorders), Yamamoto (Linguistics, Anthropology)

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 Applied Behavioral Science, 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 prosemi-
inar 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 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 22-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, one copy 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 with relevant post-baccalaureate work experience. No one is admitted for a terminal M.A. degree. Admission materials are reviewed by a subcommittee of the advisory council. The admissions committee supervises the admission process and recommends applicants to the advisory council.

Submit your application online at www.graduate.ku.edu/GAPC. Send transcripts of all completed college and university course work to

The University of Kansas
Graduate Application Processing Center
Strong Hall, 1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

Send all other requested application materials to

The University of Kansas
Child Language Program, Dole Human Development Center
1000 Sunnyside Ave., Room 3031
Lawrence, KS 66045-7555

Ph.D. Degree Requirements

For the Ph.D. degree, the student must complete all general requirements. These include residence, research skills, comprehensive oral examination, preparation of a dissertation, and the final oral examination and defense of the dissertation. Three options for fulfilling the research skills requirement are available. (1) Competence in the use of computers can be demonstrated by course work or by a successful demonstration of proficiency. Competence in both programming skills and computer applications is required. (2) Proficiency in a language other than English or reading knowledge of two languages other than English can be demonstrated. (3) A record of professional research experience or publication may be used to demonstrate research skills.

For students entering without the master’s degree, the requirements for the M.A. are at least 8 credit hours of core courses in language acquisition, 9 hours of supplemental courses in linguistics, psycholinguistics, developmental psychology, or language intervention, 6 hours of statistics, and 6 hours of thesis. Continuous enrollment in the Child Language Proseminar is required. Within three years of entering the program, students normally complete the required 30 graduate credit hours, prepare an M.A. thesis, and pass a final general examination and defense of the thesis.

Ph.D. post-master’s requirements include a minimum of 36 additional graduate credit hours. These should include at least 8 hours of additional core courses, 15 hours of additional supplemental courses, 9 hours of additional statistical and methodological courses, and a minimum of 6 hours of dissertation. Continuous enrollment in the proseminar is required.

After completing the research skills requirement and the major portion of the course work, the doctoral student must pass a written preliminary examination and a comprehensive oral examination. The written examination covers four areas: (1) language acquisition, (2) psycholinguistics, (3) developmental psychology, (4) disordered language development or language intervention. The comprehensive oral examination covers the major field, taking one of five forms: (1) a defense of the written preliminary examinations, (2) a defense of a completed research project, (3) a prospectus for a future research project, (4) a discussion of a major review paper, or (5) a review of a research grant proposal and a simulated site visit defense of the proposal. All students are expected to be engaged continuously in research on child language. Research involvement is documented with appropriate enrollment in research, thesis, and dissertation credit hours, and in the proseminar in child language.

Courses

See course listings for the cooperating departments.

Chinese

See East Asian Languages and Cultures.

Classics

Chair: Pamela Gordon
Wescoe Hall, 1445 Jayhawk Blvd., Room 2099
Lawrence, KS 66045-7590, www2.ku.edu/~classics, (785) 864-2396

Graduate Adviser: Anthony Corbeill, 2100 Wescoe Hall, (785) 864-2393

Professors: Corbeill, Lombardo, Younger

Professors Emeriti: Lind, Phillips

Associate Professors: Gordon, Shaw, Welch

Associate Professors Emeriti: Banks, Rosen

Assistant Professors: Scioli, Stinson

The Department of Classics offers advanced course work in the ancient civilizations of Greece and Rome. Students are expected to study the classical languages (Greek and Latin) and litera-
tures as well as the art and archaeological remains of the Greek and Roman worlds.

Admission
The B.A. in classics or another field in the humanities is required. For admission to the graduate program, the entering student should have 15 junior/senior hours in Latin and/or Greek. Financial support is available in the form of teaching assistantships in Latin, Greek, or mythology. Well-qualified candidates with fewer hours in ancient languages 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 online at www.graduate.ku.edu/GAPC. Send transcripts of all completed college and university course work to

The University of Kansas
Graduate Application Processing Center
Strong Hall, 1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535
Send all other requested application materials to

The University of Kansas
Graduate Adviser, Department of Classics
Wescowe Hall, 1445 Jayhawk Blvd., Room 2099
Lawrence, KS 66045-7590

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 graduate study, the student must also demonstrate a reading knowledge of German, Italian, or French by using the established university procedures for determining graduate language proficiency (as defined under Doctoral Degree Requirements, Research Skills in the General Information chapter).

Examinations. A written general examination is required of all M.A. students. For further information, see the departmental handbook.

■ Classics Courses

CLSX 501 The History of the Latin Language (3).
CLSX 502 Development of Ancient Greece, ca. 1000-300 B.C. (3).
CLSX 525 Aegean Archaeology and Art (3).
CLSX 526 Greek Archaeology and Art (3).
CLSX 527 Roman Archaeology and Art (3).
CLSX 528 Archaeology and Art of Greece and Rome (3).
CLSX 529 Archaeology and Art of the Ancient Near East (3).
CLSX 570 Study Abroad Topics in Greek and Roman Culture: ______ (1-3).
CLSX 575 Readings in: ______ (1-3).
CLSX 576 Topics in Greek and Roman Literature: ______ (3).
CLSX 577 Topics in the Archaeology and Art of the Ancient Mediterranean: ______ (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. RHS
CLSX 718 Investigations in Greek Drama II (3). A continuation of CLSX 717. Attendance at CLSX 388 plus one seminar per week. No knowledge of Greek is required. RHS
CLSX 790 Practicum in the Teaching of Classics (0.50). Required of all assistant instructors and teaching assistants in the teaching of Classics courses. May be repeated up to three semester hours credit in total. FLD

■ Greek Courses

GRK 508 Early Greek Philosophy (3).
GRK 701 Archaic Poetry (3). Close reading of texts from Homer, Hesiod, Pindar, the lyric poets. LEC
GRK 702 Drama (3). Close reading of texts from Aeschylus, Sophocles, Euripides, Aristophanes. LEC
GRK 703 History and Oratory (3). Close reading of texts from Herodotus, Thucydides, Xenophon, Attic orators. LEC
GRK 704 Philosophy (3). Close reading of texts from Plato, Aristotle, the Pre-Socratics. LEC
GRK 705 Readings in Classical Greek (3). Extensive reading in a variety of Greek authors. LEC
GRK 790 Practicum in the Teaching of Greek (0.50). 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. RHS
GRK 899 Thesis (1-4). THE

■ Latin Courses

LAT 700 Advanced Latin Prose Composition (3). An examination of the grammar, syntax, and style of the Latin language through exercises in composition. Prerequisite: Consent of instructor. LEC
LAT 701 Epic Poetry (3). Close reading of texts from Vergil, Lucretius, Ovid. LEC
LAT 702 Lyric and Elegy (3). Close reading of texts from Catullus, Horace, Ovid, Tibullus, Statius. LEC
LAT 703 History, Oratory, Philosophy (3). Close reading of texts from 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, including Cicero. LEC
LAT 790 Practicum in the Teaching of Latin (0.50). 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. RHS
LAT 899 Thesis (1-4). THE

Clinical Child Psychology

Director: Michael C. Roberts
Dole Human Development Center, 1000 Sunnyside Ave., Room 215
Lawrence, KS 66045-7555, www2.ku.edu/~clchld, (785) 864-4226
Core Faculty: Biggs, Jackson, Roberts, Steele, Vernberg, and Faculty of the Departments of Applied Behavioral Science and Psychology (see department listings)
The Clinical Child Psychology Training Program leading to the doctoral degree is affiliated with the Departments of Applied Behavioral Science and Psychology. 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.
Doctoral training develops scientist-practitioners capable of conducting research and interventions for a variety of human problems, particularly those involving children and families. Such work requires understanding, prevention, and treatment of mental and physical health problems from a psychological perspective. The program emphasizes acquisition of general knowledge and skills in the behavioral, social, cognitive, and biological bases of psychology, and thorough knowledge of research methodology and statistical analyses. A particular strength is the developmental perspective. 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, prevention, public sector and social interventions, and professional issues. Didactic and practical experiences prepare graduates for the many roles open to clinical child psychologists. Students can take positions in research/teaching in universities, medical schools, and internship sites, and direct service delivery in mental health centers, hospitals, and schools.

This program 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.

Submit your application online at www.grad.ku.edu/GAPC. Send transcripts of all completed college and university course work to The University of Kansas Graduate Application Processing Center Strong Hall, 1450 Jayhawk Blvd., Room 313 Lawrence, KS 66045-7535

Send all other requested application materials to The University of Kansas Clinical Child Psychology, Dole Human Development Center 1000 Sunnyside Ave., Room 1010 Lawrence, KS 66045-7555

Admission is highly competitive. All completed files are reviewed and incoming students are selected by an admissions committee of advanced students and faculty members, headed by the training director. Essential requirements are a bachelor's degree from an accredited institution and a record of achievement that shows a strong promise of success in course work and in research and clinical work. Applicants should have at least 15 credit hours in psychology, including statistics and research methodology. Highly rated applicants have experience appropriate to their level in psychological research and applied interactions with children. Criteria include transcripts and grade-point 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.

**Clinical Child Psychology Curriculum**

The following curriculum meets criteria for APA accreditation and KU general requirements.

**Psychology Core**

1. **Biological Aspects:** PSYC 961 Biological Foundations of Psychopathology
2. **Cognitive/Affective Aspects:** PSYC 870 Cognitive Development
3. **Social Aspects:** ABSC 825/PSYC 825 Social Development
4. **History of Psychology:** PSYC 805 History of Psychology or ABSC 921 The History and Systems of Psychology or PRE 998 Seminar in: History of Psychology
5. **Cultural and Ethnic Diversity:** PSYC 888 Diversity Issues in Clinical Psychology or PRE 875 Cross Cultural Counseling

**Clinical Child Psychology Specialty Skills**


**Intervention and Therapy Procedures.** Required: PSYC 976 Therapeutic Interventions with Children PSYC 967 Psychotherapy with Families or PRE 956 Theory of Marriage and Family Counseling or PSYC 946 Theories and Methods of Psychotherapy or PSYC 949 Empirically Supported Treatment or PSYC 936 Group Therapeutic Techniques

**Clinical Practica.** Required (17 credit hours, 275 contact hours): ABSC 846/PSYC 846 Practicum in Clinical Child Psychology I ABSC 847/PSYC 847 Practicum in Clinical Child Psychology II ABSC 943/PSYC 943 Advanced Practicum in Clinical Child Psychology III ABSC 944/PSYC 944 Advanced Practicum in Clinical Child Psychology IV ABSC 947/PSYC 947 Advanced Practicum in Clinical Child Psychology V

**Ethics/Professional Standards.** Required: PSYC 975 Professional and Ethical Problems in Clinical Psychology or PRE 880 Legal, Ethical, and Professional Issues in Counseling ABSC 809/PSYC 809 Professional Issues: Clinical Child Psychology (one semester) Clinical adult psychology workshop (offered every other year) Students are expected to function within the code of ethics in their behavior and personal demeanor. Adherence to these ethical principles is part of the regular evaluation of students for completion of the degree in clinical child psychology.

**Consultation and Supervision.** PRE 945 Supervision in Counseling

**Research and Statistics Core Courses.** Required: PSYC 815 Design and Analysis for Developmental Research or PSYC 968 Research Methods in Clinical Psychology PSYC 790 Statistical Methods in Psychology I or PRE 811 Analysis of Variance PSYC 791 Statistical Methods in Psychology II or PRE 904 Regression Analysis

**Alternatives to PSYC 791/ PRE 904 include:** ABSC 735 Within Subjects Research Methodology and Direct Observation and ABSC 796 Laboratory in Behavioral Development and Modification: The Analysis of Behavior I or ABSC 940 Measurement and Experimental Design for Applied Research

**Special Research Skill.** Demonstrated computer competence or additional statistical or data analysis course.

KU's clinical child psychology program won a Society of Clinical Child and Adolescent Psychology award as the best doctoral training program for students studying clinical child and adolescent psychology for 2004-05.

KU's clinical child psychology program won an American Psychological Association Award for Distinguished Contributions for the Education and Training of Child and Adolescent Mental Health Psychologists in 2006.
Master's Degree and Thesis. The master’s degree requires a thesis consisting of empirical research and a minimum of 30 hours of course work (24 of which must be nonthesis credit hours). A minimum of 6 credit hours in ABSC 897/PSYC 897 Master’s Thesis in Clinical Child Psychology is required.

Ph.D. Preliminary Examination: The Task. The program uses the Task system for its preliminary examination in applied/clinical area, research/methodology, or teaching. Details are available from the program director.

Ph.D. Oral Comprehensive Examination. Upon completion of all course requirements for the Ph.D. and of the Task, except for dissertation and internship, the student must pass the oral comprehensive examination. Details are available from the program director.

Doctoral Dissertation. The Ph.D. dissertation must be based on an original, empirical investigation. A minimum of 12 hours in dissertation in clinical child psychology is required.

Predoctoral Internship. An 11-month clinical internship at a setting accredited by the American Psychological Association is required. Students enroll in ABSC 963/PSYC 963 for a total of 3 credit hours.

Courses
See the course listings for the Departments of Applied Behavioral Science and Psychology.

Communication Studies
Chair: Robert Rowland
Bailey Hall, 1440 Jayhawk Blvd., Room 112
Lawrence, KS 66045-7574, www2.ku.edu/~coms, (785) 864-9868
Graduate Adviser: Beth Manolescu, 116E Bailey Hall, (785) 864-9018
Professors: Asuncion-Lande, Carlin, Hummert, Parson, Rowland
Courteous Professors: Kemper, Shelton
Professors Emeriti: Baumgartel, Conboy, Friedman, Kunkel, Linkugel
Associate Professors: Baym, Beisecker, Friedman, Kunkel, Manolescu, Pennington, Russo
Assistant Professors: Banwart, Bruss, Childers, Dennis, Hall, Harris, Schmisser, Tell, Zhang

Admission
All domestic M.A. and Ph.D. applicants on the Lawrence or Edwards campuses must submit the Graduate Record Examination. International students who apply to Lawrence must submit Test of English as a Foreign Language scores. International students who have earned a U.S. degree must submit GRE scores.

Submit your application at www2.ku.edu/~coms. Send the application (paper or online), application fee, GRE scores and one set of official transcripts to

The University of Kansas
Graduate Application Processing Center
Strong Hall, 1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7575

Send curriculum vitae or résumé, three letters of recommendation and a two- to three-page personal statement to

The University of Kansas
Beth Manolescu, Graduate Director
Department of Communication Studies
Bailey Hall, 1440 Jayhawk Blvd., Room 102
Lawrence, KS 66045-7574

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 (50 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 Prerequisite in Communication Studies ........................................... 3
   COMS 809 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 Prerequisite in Communication Studies ........................................... 3
   COMS 850 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:

   • One hour written over required courses
   • Two hours written over the first major area of communication
   • Two hours written over the second major area of communication
   • One hour oral examination

KU Edwards Campus M.A. Program
The M.A. also is offered on the KU Edwards Campus in Overland Park. The requirements for the degree at the Edwards Campus are the same as for the program on the Lawrence campus. Edwards Campus classes are taught by the same faculty members who teach regularly in Lawrence. Courses are scheduled during the evenings to accommodate working professionals.

Ph.D. Degree Requirements

Concentration in Communication Studies. Requirements include 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. The 18 hours need not be all in the same department. They may be used to broaden or intensify the program, as long as they constitute a meaningful course of study. Only 6 hours may be in independent study. Students with master’s degrees from other universities satisfy this requirement with 18 hours from their master’s programs.

4. A minimum of 15 hours of research methodology:

   (a) Courses required of all students:
   COMS 850 Introduction to Research Methods ................................................ 3
   COMS 851 Communication Research: Historical and Descriptive (3) or
   COMS 852 Communication Research: Experimentation and Quantitative
   Analysis (3) .................................................................................................. 3
   (b) Choose 9 additional hours from the following courses appropriate to the
   student’s research/dissertation interest ......................................................... 9

Experimental and Quantitative Empirical Methods

COMS 856 Communication Research: Quantitative Analysis (3)
COMS 956 Principles of Analysis of Variance (3)
COMS 957 Principles of Correlational and Multiple Variate Analysis (3)
PRE 905 Multivariate Analysis (3)
PRE 906 Confirmatory Factor Analysis and Multivariate Statistical Modeling (3)

Historical/Critical

HIST 805 The Nature of History (3)
ENCL 908 Seminar in Literary Criticism: _______ (3)
COMS 955 Seminar in Rhetorical Criticism (3)
TH&F 920 Practicum in Criticism (3)
COMS 930 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 855 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. Competency levels are determined through consultation with the appropriate language department or program.

5. Ph.D. dissertation (18 or more hours)
6. Satisfactory completion of the oral and written comprehensive examination
7. Final oral examination

### Communication Studies Courses

**COMS 503** Post-Soviet Communication (3).
**COMS 530** Internship in Communication Studies (1-3).
**COMS 531** Seminar in Leadership Strategies and Applications (3).
**COMS 532** Leadership Studies Practicum (1-3).
**COMS 535** American Public Address, Puritans to 1900 (3).
**COMS 536** American Public Address, 1900–Present (3).
**COMS 537** Communication in Conflict Resolution (3).
**COMS 538** Persuasion Theory and Research (3).
**COMS 539** Argumentation (3).
**COMS 543** Group Leadership Practicum (1-3).
**COMS 544** Advanced Interpersonal Communication: Theories and Research (3).
**COMS 545** Narratives in Oral Communication (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** Communication in Political Campaigns (3).
**COMS 559** Seminar in: _____ (2-3).
**COMS 560** Seminar in: _____ (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).
**COMS 741** Special Topics in Communication Studies (2-3).
**COMS 784** Proseminar in Communication and Aging (1). A weekly forum for students and faculty to discuss professional issues and interdisciplinary research in communication and aging. May be repeated for credit. (Same as PSYC 784.) (Same as SOCI 784.) Prerequisite: instructor consent. LEC

**COMS 787** Gerontology Proseminar (3). A proseminar coordinated by the Gerontology Center. The proseminar explores essential areas of gerontology for researchers and practitioners, providing a multidisciplinary (psychology, biology, sociology, and communication) perspective on aging. The proseminar topics cover the social, applied and public policy, research, service programs, and policy and management issues in gerontology. (Same as ABCS 787, AMS 787, PSYC 787, and SOC 787.) (Formerly HDFL 787.) LEC

**COMS 807** Rhetoric, Politics and the Mass Media (3). This course investigates the ways in which rhetorical strategies (persuasive and linguistic usage) permeate the relationship between politics and politicians 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, and 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 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 instructor. LEC

**COMS 835** Impression Formation and Interpersonal Behavior (3). Intensive investigation of the processes involved in impression formation and of the effects of established impressions upon interpersonal communication. (Same as PSYC 843.) Graded on a satisfactory/fail basis. Prerequisite: COMS 545 or PSYC 670. LEC

**COMS 834** Changing Communication Behavior (3). Study of theory, research, and methods related to changing communication behavior in teaching, training, counseling, coaching, and counseling contexts. LEC

**COMS 844** Seminar in Interpersonal Communication (3). This class will address current research and theory in interpersonal communication. 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 interrelationships 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 to 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 I-2 organizations. Students work as a consulting group to analyze dimensions of communication, communication conflicts, 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. Approaches considered will include (a) humanistic message analysis and evaluation; (b) ethnocentric and observational techniques; (c) survey construction and execution; and (d) experimental design and procedures. Special focus on issues of validity, reliability, and ethics. 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: Experimentation and Quantitative Analysis (3). An introduction to the process of research in communication studies, including consideration of basic principles in research design, methods of observation and measurement, and the application of appropriate statistical techniques. LEC

**COMS 855** Qualitative Research Methods in Communication Studies (3). Study of strategies for describing communication behavior in particular contexts, emphasizing ethnography and specific observational and interview data gathering and analysis methods. Prerequisite: COMS 755 or equivalent. LEC

**COMS 856** Communication Research: Qualitative Analysis (3). An intermediate overview of statistical techniques commonly used in communication research. Content will include a review of univariate statistical tests such as t-test, correlation, chi-square, and other nonparametric techniques of data analysis. Additionally, factorial analyses of variance, multiple regression, and factor analysis will be covered, along with the application of appropriate statistical techniques. Prerequisite: COMS 850 and an introductory course in statistics. LEC

**COMS 859** Proseminar 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…

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.

changes in organizational communication patterns, participant responses to the technological and external forces of the outside environment, face-to-face 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 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). THE

COMS 907 Seminar in Political Communication (3). This course will focus on contemporary political communication theory and illustrate how such theories are exemplified in modern political contexts: political arguments and development concepts, communication strategies in Congressional and bureaucratic decision-making, the rhetorical presidency, dissemination of political information, political narrative, and political campaigns. LEC

COMS 930 Seminar in Speech: _____ (2-4). Special problems in speech. Prerequisite: Twelve hours 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, Aristotle, Quintilian, Cicero, and Longinus. LEC

COMS 933 Theories of Rhetoric: Neo-Classical (2-3). A study of the development of rhetorical theory from 325 A.D. to the 20th century. 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, Blunt, John Quincy Adams, and the elocutionary movement. LEC

COMS 936 Seminar in Language and Discourse (3). Seminar uses interdisciplinary readings to examine central theoretical questions regarding language and communication. The course moves from considering major theoretical positions to current research in communication on discourse. Methodological issues in the study of language and culture are also considered. LEC

COMS 938 Seminar in Persuasion (2-3). Examination of selected topics in persuasion, with emphasis on the application of recent theories and experimental research to the analysis of persuasive discourse. Prerequisite: COMS 538 or equivalent. LEC

COMS 939 Seminar in Argumentation (2-3). Examination of special problems in argumentation with attention to the relationship of systems of argumentation to their philosophical presuppositions. Discussion of the writings of Toulmin, Nata- son, Johnstone, Perelman, Dewey. Prerequisite: COMS 539 or equivalent. LEC

COMS 941 Seminar in Health Communications (3). This course is a survey of the many disciplines of study found in the field of health communication. Emphases include decision making regarding health-related behaviors, the influence of interpersonal messages, negotiating treatment with health care providers, coping with medical difficulties, the critical examination of mental research, news, and health campaigns, and the impacts of new technologies. SEM

COMS 942 Seminar in Small Group Communication (2-3). Study of communication in face-to-face and co-acting groups. Analysis of research in group communication. LEC

COMS 943 Seminar in Human Relations Training Theory (3). Concepts and practices of various approaches to teaching and training in human relations. Topics of group development and the trainer role. Current issues in training; sensitivity approaches, instrumented groups, theory of structured exercises, laboratory planning. Prerequisite: 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. Prerequisites: COMS 943 and consent of instructor. FLD

COMS 945 Seminar in Social Support (3). This course is a survey of the many disciplines of study found in the field of health communication. Emphases include decision making regarding health-related behaviors, the influence of interpersonal messages, negotiating treatment with health care providers, coping with medical difficulties, the critical examination of mental research, news, and health campaigns, and the impacts of new technologies. SEM

COMS 946 Seminar in Communication and Intergroup Relations (3). Conceptual and theoretical frameworks for exploring and understanding relations between individuais from different societal groups (e.g., cultural/ethnic, gender, age). Focus on issues of identity, power relations as manifested in interpersonal, mass media, and organizational contexts. The course will include methodological and applied implications for studying different groups, both within the U.S. and around the world. LEC

COMS 947 Communication 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. Speech 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 operation of organized groups. LEC

COMS 949 Communication Strategies and Human Resources (3). Leadership and human resource issues are analyzed in terms of communication strategies in organizations. Applications are made to teambuilding, training, group development, motivation, and organizational development. LEC

COMS 950 Seminar in Public Address: _____ (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 re-examine 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 comparative analysis of theories of communication applicable to speech behavior. Prerequisite: COMS 899 or equal. LEC

COMS 959 Theories of Rhetoric: Contemporary (3). A study of the writings on the rhetorical theory in the 20th century. Principal emphasis will be on the psychological treatment of rhetoric. I.A. Richards and Kenneth Burke, and the relationship in the 20th century between rhetoric and dialectic, rhetoric and poetic. Prerequisite: COMS 899 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

COMS 998 Investigation and Conference (For Doctoral Candidates) (1-6). (Limited to eight hours credit towards the Ph.D. degree.) Directed research and experimentation for Ph.D. students in some phase of speech science or the teaching of speech and drama. RSH

COMS 999 Doctoral Dissertation (1-12). THE

Communicative Disorders: Intercampus Program

The Intercampus Program in Communicative Disorders comprises the Department of Speech-Language-Hearing; Sciences and Disorders on the Lawrence campus and the Department of Hearing and Speech on the KU Medical Center campus. Audiology courses are listed under Communicative Disorders: Intercampus Program in the School of Allied Health chapter of this catalog. Speech-Language Pathology courses are listed below.

Speech-Language-Hearing: Sciences and Disorders, Lawrence: Chair: Hugh Catts, catts@ku.edu

Dole Human Development Center, 100 Sunnyside Ave., Room 3001

Lawrence, KS 66045-7555, www2.ku.edu/~splh

Hearing and Speech, KU Medical Center: Chair: John Ferraro, jferraro@kumc.edu

KU Medical Center, 3031 H.C. Miller Building, Mail Stop 3039

901 Rainbow Blvd., Kansas City, KS 66160

www.alliedhealth.kumc.edu/programs/hearing, (913) 588-5937

Professors: Barlow, Brandt, Catts, Ferraro, Fey, Rice

Professors Emeriti: Derich, Marston, McReynolds, Michel, Salmon, Schiefelbusch

Associate Professors: Chertoff, Jackson, Loeb, Searl, Storkel, Widen

Associate Professor Emerita: Carpenter

Assistant Professors: Auer, Ferguson, Johnson

The Intercampus Program in Communicative Disorders is directed by a committee of faculty members of professorial rank.
from each of the cooperating departments. The committee is responsible for instruction, curriculum planning, student selection and advising, clinical practicum policies, and course scheduling. Its recommendations are subject to review by the departments. The program offers the Master of Arts and Doctor of Philosophy degrees in speech-language pathology, and the Doctor of Audiology (Au.D.) and Ph.D. in audiology. The Lawrence department collaborates with the Departments of Applied Behavioral Science, Linguistics, and Psychology to offer a Ph.D. in child language. Although the committee directs a broad set of activities related to the intercampus program, it is not a degree-granting agency.

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 online at www.graduate.ku.edu/GAPC. Send transcripts of all completed college and university course work to

The University of Kansas
Graduate Application Processing Center
Strong Hall, 1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

Send all other requested application materials to

The University of Kansas Medical Center
Department of Hearing and Speech, 3031 H.C. Miller Bldg.
Mail Stop 3039, 3901 Rainbow Blvd.
Kansas City, KS 66160

Master’s Degree Programs

Requirements for the M.A. Degree with a Major in Speech-Language Pathology. Prerequisites:

- An acceptable bachelor’s degree
- Thirty-four hours of credit in speech pathology, including
  SPLH 120, SPLH 261, SPLH 320, SPLH 465, SPLH 466, SPLH 565, SPLH 566, SPLH 660, SPLH 662, SPLH 663, SPLH 668, and SPLH 671, or their equivalents
- Twenty hours of credit in allied fields, including courses in
  physiology, linguistics, and psychology

Degree Requirements: The program requires 34 credit hours of experiences for breadth and an additional 12 to 16 hours for depth.

Required Graduate Experiences for Breadth

- SPLH 764 Seminar in Multicultural Issues .......................................................... 2
- SPLH 860 Evaluation of Speech and Language .................................................. 2
- SPLH 862 Clinical Processes .................................................................................. 2
- SPLH 864 Advanced Clinical Practice in Speech-Language Pathology ........... 7
- SPLH 868 Professional Seminar ........................................................................... 2
- Research experience (thesis or nonthesis option) ................................................. 3
- SPLH Electives (Eight 2-credit-hour seminars) ..................................................... 16

Required Graduate Experiences for Depth

- SPLH 866 Field Study in Speech-Language Pathology ..................................... 5
- Advanced electives (SPLH, outside department, or thesis) ............................... 6
- Second field study or fourth practicum experience ........................................... 1-5

Students also must pass the Speech-Language Pathology Praxis examination with a score of at least 600.

Requirements for the M.S. in Education Degree with a Specialization in Deaf Education. For information, see Special Education in the School of Education chapter of this catalog.

Au.D. Degree Requirements: Audiology

The Doctor of Audiology (Au.D.) program prepares students to meet the academic and clinical requirements for the Certificate of Clinical Competence awarded by the American Speech-Language-Hearing Association; it is designed to be completed in four years. Courses include basic science, clinical science, and clinical procedures. Consistent with ASHA certification standards, degree requirements also include the completion of a minimum of 2,000 hours of super-vised clinical practicum. Au.D. students also must complete a research project and present the findings at a faculty-student forum.

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 nonthesis master’s 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, the student and his or her adviser choose a doctoral advisory committee. This committee begins its function as soon as possible and approves the student’s program by no later than the end of the second semester of residence. The three-person committee must include the student’s adviser and at least one additional member from the intercampus executive committee. The committee works with the student in planning a program consonant with the career goals of the student and the resources of the department. The committee is responsible for guiding the student’s progress through the selected program of study.

To meet general requirements, the Ph.D. aspirant must pass an oral comprehensive examination. Before being admitted to this examination, the student must have satisfied (1) the majority of course requirements (defined by the advisory committee) in the student’s emphasis area (a minimum of 40 graduate credit hours in the major interest, which may include hours accumulated toward a master’s degree), (2) 15 graduate hours in research, (3) a minimum of 12 graduate hours in a correlative area outside the student’s major emphasis, and (4) satisfactory performance on a written preliminary examination encompassing the student’s emphasis area and research skills. Students also must complete the FLORS requirement as outlined in the Ph.D. Handbook of the Intercampus Program.

After the student has passed the comprehensive examination, she or he must complete a research project approved by a committee of three faculty members and write a dissertation based on that research. The dissertation is expected to be a scholarly work that reflects the student’s ability to conduct independent, original research. A minimum of 10 hours of dissertation credit is required. Completion of the dissertation is followed by the final oral examination and defense of the dissertation. Additional information about the department and about faculty research interests is contained in a departmental brochure available upon request.

Ph.D. Degree Requirements: Child Language

For information on the Ph.D. in Child Language, see Child Language in this chapter of the catalog.

Financial Aid

Students in the speech-language pathology and audiology programs may apply for teaching, clinical, and research assistantships, U.S. Office of Education fellowships, Veterans’ Administration Hospital traineeships, and other types of financial assistance.

Speech-Language-Hearing: Sciences and Disorders Courses

For courses in Audiology, see the School of Allied Health chapter of this catalog.

- SPLH 565 Language Sample Analysis Lab (1)
- SPLH 566 Language Development (3)
- SPLH 660 Research Methods in Speech-language-hearing (3)
SPLH 662 Principles of Speech Science (3).
SPLH 663 Principles of Hearing Science (3).
SPLH 668 Introduction to Audiological Assessment and Rehabilitation (4).
SPLH 670 Beginning Clinical Practice in Audiology (1-3).
SPLH 671 Introduction to Speech-language Pathology (4).
SPLH 672 Clinical Practice in Speech-language Pathology (3).
SPLH 699 Speech-language Pathology (3).
SPLH 761 Aural Rehabilitation (3). Study of the communication problems associated with hearing loss. Introduction to aural habilitative 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 special topics from speech pathology and audiology. Special prerequisite may be established for a given topic. LEC
SPLH 784 Proseminar in Communication and Aging (1). A weekly forum for students and faculty to discuss professional issues and interdisciplinary research in communication and aging. May be repeated for credit. (Same as COMS 784.) (Same as PSYC 784.) Prerequisite: Consent of instructor. LEC
SPLH 799 Proseminar in Child Language (2). A review and discussion of current issues in children’s language acquisition. May be repeated for credit. Students are graded S/F. (Same as ABSC 797, LING 799 and PSYC 799). (Formerly HFL 797.) LEC
SPLH 816 Language Development (3). Study of language acquisition in children, including discussion of preschool language development and clinical issues. Discussion 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 826 Phonatory Disorders (2). This course describes the neuromotor and organic 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 Pharyngeal Disorders (2). This course reviews the function of the laryngeal and respiratory mechanisms including the parameters and processes of phonation. Primary content addresses diagnosis, description, and treatment of organic and non-organic disorders of phonation. LEC
SPLH 828 Speech Disorders in Special Populations (2). This course reviews anatomy and physiology of the velopharyngeal mechanism. Diagnosis and management of velopharyngeal dysfunction and associated problems considered. Anatomy, physiology, and rehabilitation associated with certain oral, pharyngeal, and laryngeal abnormalities discussed. Emphasis is on the speech problems of adults following medical management. Populations include individuals with laryngeal tumors, glottis, and tracheostomy. 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 detection, assessment, and treatment of communication problems associated with particular genetic syndromes (e.g., Down’s, Turner’s syndromes). Also covered are current data about the genetic factors involved in nonsyndromic communication and learning problems. The implications of this information for intervention are considered. LEC
SPLH 840 Language Disorders of 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 99-457 are also examined. LEC
SPLH 842 Language Disorders of Children: Preschool (2). This course examines language development and intervention strategies for 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 examined. 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., ADHD). Lamination and evaluation of therapy procedures, intervention strategies and AAC information resources. LEC
SPLH 850 Language Disorders Secondary to Closed Head Injury and Dementia (2). Neuroanatomy and physiology relevant to diffuse brain injury are discussed. Characteristics and intervention strategies relating to traumatic brain injury and dementia are studied. LEC
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 evaluation 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 program. Therapy models, planning, and philosophical issues 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 870 Independent Study in Speech-language Pathology (1-5). An individualized study under faculty supervision. Assignments must be approved by faculty. May be repeated for credit. LEC
SPLH 880 Seminar in Speech-Language Pathology: (1-3). May be repeated for credit. LEC
SPLH 886 Professional Seminar (1). Forum for the presentation and discussion of scientific and professional issues by faculty and advanced graduate students. May be repeated for credit. LEC
SPLH 874 Research Practicum (3). Application of research methodology in a laboratory situation. Emphasis is on direct participation in designing and conducting an experimental investigation in speech or hearing. Prerequisite: SPLH 760. FLD
SPLH 876 Independent Study in Problems of Speech, Language, and Hearing (1-6). Investigation of special topics by individual master’s level students. Paper required. Prerequisite: Consent of instructor. RSH
SPLH 880 Seminar in Speech-Language Pathology: (1-3). May be repeated for credit. LEC
SPLH 898 Investigation and Conference (For Master's Candidates) (1-8). (Limited to eight hours credit toward the M.A. degree.) Directed research and experimentation for M.A. students in some phase of speech science. RSH
SPLH 899 Master's Thesis (1-6). TH
SPLH 961 Experimental Phonetics II (3). This course will provide a description of the acoustic properties of the major classes of speech sounds, and will describe how these properties are utilized perceptually. It will also provide an understanding of the acoustic theory of speech production, and will discuss the implications of that theory relative to the modification of impaired speech. LEC
SPLH 962 Experimental Phonetics II (3). This course will examine the current methodologies utilized in speech physiology research, and will review the findings of recent research into the movement patterns of individual speech articulators. The course will emphasize the interpretation of individual research results in terms of an overall theory of speech motor timing and control. LEC

The 2007 edition of U.S. News & World Report’s “America’s Best Graduate Schools” ranked KU’s graduate program in speech-language pathology sixth in the nation. KU’s audiology program ranked fifth nationwide.

Certification as a speech-language pathologist in Kansas public schools requires a master’s degree.

For AUD courses, see the School of Allied Health chapter of this catalog.

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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.

Graduate Record Examination verbal and analytical test scores are required. Submit your application online at www.graduate.ku.edu/GAPC. Send transcripts of all completed college and university course work to

**The University of Kansas**
Graduate Application Processing Center
Strong Hall, 1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

The application deadline for fall enrollment is May 1.

Send all other requested application materials to

**The University of Kansas**
Department of East Asian Languages and Cultures
Wescoe Hall, 1445 Jayhawk Blvd., Room 2118
Lawrence, KS 66045-7590

**Master’s Program**
The department offers a master’s degree in East Asian languages and cultures. The student declares his or her concentration in one of three options.

- **Chinese language and literature**
- **Japanese language and literature**
- **East Asian cultures**

Students of Chinese or Japanese language and literature gain in-depth knowledge of these ancient civilizations, which have produced some of the world’s greatest literature.

Students of East Asian cultures develop a broad interdisciplinary knowledge of East Asia. This concentration is for students pursuing professional or noncollege teaching careers, 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:

- Three years of the modern language and, for Chinese language students, one year of classical Chinese or the demonstrated equivalent (Students not meeting this prerequisite may be admitted with deficiencies provided they achieve this level of proficiency outside the minimum of 30 graduate credit hours required for the degree.)
- Two lecture courses dealing with East Asia

Entrance requirements for students pursuing a concentration in East Asian cultures are

- At least two years of an East Asian language (Students not meeting this prerequisite may be admitted with deficiencies provided they achieve this level of proficiency outside the minimum of 30 graduate credit hours required for the degree.)
- Two lecture courses dealing with East Asia

**Requirements for Chinese or Japanese Language and Literature Concentration**

1. A minimum of 30 graduate credit hours:
   
   (a) Fourth-year level of language courses.
   
   (b) At least 18 credit hours must be taken in the department 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.

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**Computer Science**
See Electrical Engineering and Computer Science in the School of Engineering chapter of this catalog.

**Croatian and Serbian**
See Slavic Languages and Literatures.

**Czech**
See Slavic Languages and Literatures.

**Drama**
See Theatre and Film.

**East Asian Languages and Cultures**
Chair and Graduate Adviser: Keith McMahon
Wescoe Hall, 1445 Jayhawk Blvd., Room 2118
Lawrence, KS 66045-7590, www2.ku.edu/~ealc, (785) 864-3100

Professors: Johnson, McMahon
Associate Professors: Childs, Gerbert
Assistant Professors: Eda, Stevenson, Williams, Yun

The Department of East Asian Languages and Cultures is the only department in Kansas offering a regular program of instruction in the languages, literatures, and cultures of East Asia.

The areas of East Asia covered represent two of the oldest continuous civilizations of the world. The great historical contributions of China and Japan in literature, philosophy, and art are widely recognized and studied throughout the world. Today, the highly advanced industries of Japan, the enormous human resources of
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.
   (f) Students may, in consultation with the department graduate adviser, 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 565 Popular Images in Japanese Culture, Literatures, and Films
ANTH 567 Japanese Ghosts and Demons

Economics
ECON 583 Economic Issues of East Asia

Geography
GEOG 596 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 696 Seminar in: ______

History of Art
HA 503 Japanese Prints
HA 545 Early Japanese Art
HA 687 Art of Modern China
HA 705 Major Artists: ______
HA 766 Calligraphy of China and Japan
HA 782 Japanese Painting
HA 783 Edo Period Painting
HA 785 Masters of Sung and Yuan Dynasty Painting
HA 786 Masters of Ming and Ch’ing Dynasty Painting
HA 787 Chinese Painting
HA 788 Proseminar in Japanese Art
HA 789 Proseminar in Chinese Art
HA 822 Seminar in Buddhist Art: ______
HA 824 Seminar in Edo Period Painting
HA 825 Seminar in Zen Painting and Calligraphy
HA 826 Seminar in Japanese Literati Art
HA 980 Seminar in Chinese Art: ______
HA 990 Seminar in Japanese Art: ______

Philosophy
PHIL 506 Chinese Thought

Political Science
POLS 656 Governments and Politics of East Asia
POLS 657 Government and Politics of Southeast Asia
POLS 660 The Politics and Problems of Developing Countries
POLS 676 International Relations of Asia
POLS 678 Chinese Foreign Policy
POLS 936 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 733 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

For additional courses in the above disciplines, see appropriate sections in this chapter of the catalog.

Chinese Courses

CHIN 504 Advanced Modern Chinese I (5).
CHIN 508 Advanced Modern Chinese II (5).
CHIN 512 Advanced Chinese I (2).
CHIN 513 Advanced Chinese II (2).
CHIN 542 Introduction to Classical Chinese I (3).
CHIN 544 Introduction to Classical Chinese II (3).
CHIN 562 Modern Chinese Literature I (3).
CHIN 564 Modern Chinese Literature II (3).
CHIN 580 Introduction to Chinese Research Materials (1).
CHIN 598 Readings in: ______ (1-3).
CHIN 690 Seminar in Chinese Texts (1-3).
CHIN 801 Directed Readings and Research in Chinese (1-4).

EALC 508 Religion in China (3).
EALC 509 Religion in Japan (3).
EALC 510 Education in Japan (3).
EALC 520 Entrepreneurship in East Asia (3).
EALC 527 Asian Theatre and Film (3).
EALC 530 Chinese Culture (3).
EALC 536 Cultural Traditions of Japan (3).
EALC 563 Cultural History of Korea (3).
EALC 565 Popular Images in Japanese Culture, Literatures, and Films (3).
EALC 567 Japanese Ghosts and Demons (3).
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).
EALC 584 Modern China (3).
EALC 585 Reform in Contemporary China (3).
EALC 586 Ancient and Medieval Japan (3).
EALC 587 Early Modern Japan (3).
EALC 588 Japan, 1853-1945 (3).
EALC 589 Japan Since 1945 (3).
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).
EALC 593 Modern Korea (3).
EALC 594 Law and Society in Traditional China (3).
EALC 596 Defining Japan: Marginalized Groups and the Construction of National Identity (3).
EALC 597 Japanese Theatre History (3).
EALC 598 History and Structure of the Japanese Language (3).
EALC 600 Biography of a City: ______ (3).
EALC 612 Visual and Literary Culture in Modern Japan (3).
EALC 615 Ancient China (3).
EALC 618 Sexual Politics in Dynastic China (3).
EALC 620 Daily Life in China from the Opium War to the Present (3).
EALC 636 Women in Japanese Literature (3).
EALC 642 Chinese Thought (3).
EALC 646 Chinese Law (3).
EALC 656 Government and Politics of East Asia (3).
EALC 666 Political Economy of East Asia (3).
EALC 676 International Relations of Asia (3).
EALC 682 Chinese Foreign Policy (3).
EALC 700 Introduction to East Asian Studies (1).

EALC 712 Readings in Traditional Japanese Literature (3).
EALC 714 Readings in Traditional Chinese Literature (3).

A general survey of representative literary works of major genres in traditional China. Lectures, assigned
readings, and discussions in English. A knowledge of Chinese is not required. (Not open to students with credit in EALC 314.) LEC

EALC 716 Readings in Modern Japanese Literature (3). A survey in English of contemporary Japanese literature. Students will become familiar with the major authors, schools, and genres. An individual research project will be carried out in an area of the student's special interest. (Not open to students with credit in EALC 316.) LEC

EALC 718 Readings in Modern Chinese Literature (2-3). A general survey of the important writers of the 20th century and their works. Lectures, readings, and discussions in English. A knowledge of Chinese is not required. (Not open to students with credit in EALC 318.) LEC

EALC 732 Seminar in Eastern Religious Thought: _____ (3). Analysis of the religious thought of selected thinkers of India, China, and/or Japan, traditional and modern. May be taken more than once if subject matter varies sufficiently. (Same as REL 762.) Prerequisite: REL 507, REL 508, REL 509, or permission of the instructor. LEC

EALC 733 Seminar in Eastern Religious Texts: _____ (3). Analysis of a selected religious text or texts from India, China, or Japan, in translation. May be taken more than once if subject matter varies sufficiently. (Same as REL 733.) Prerequisite: REL 507, REL 508, REL 509, or permission of the instructor. LEC

EALC 747 Teaching about East Asia (2). An advanced survey of the history, culture, and contemporary affairs of China, Japan, and Korea, specifically designed for K-12 educators who wish to incorporate East Asian topics into their classroom teaching. Pedagogical methods and resources for the study of East Asia will be emphasized. Topics covered will address relevant benchmarks in the state curricular standards in social studies, themes from the Advanced Placement world history examination, and the national standards in world history. (Same as HIST 747.) Prerequisite: Approval of the instructor. LEC

EALC 762 Readings in Japanese Religion (3). A high-level introduction to the traditional religions of Japan, with special emphasis on Japanese Buddhism. Texts to be used will include translations of original documents as well as secondary studies. Those students who have competence in Japanese will be required to do some readings in that language, but a knowledge of the language is not a prerequisite. LEC

EALC 764 Japanese Special Topics: Their Culture and Literature: _____ (3). A study of Japanese people’s life cycle through a combination of theoretical social scientific observations of Japanese as a cultural group and personal literary descriptions of them. An individual research paper is required. (Not open to students with credit in EALC 366.) LEC

EALC 766 Japanese Special Topics: Their Religion and Society: _____ (3). Analysis of selected Asian religions and their relationships to selected Asian societies. May be taken more than once if subject matter varies sufficiently. (Same as REL 776.) Prerequisite: REL 507, REL 508, REL 509, or permission of the instructor. LEC

EALC 790 Topics in East Asian Languages and Cultures: _____ (1-3). Special topical courses covering a number of disciplines. Credit descriptions and prerequisites will vary. NOTE: May be repeated for up to 12 total credits. RSH

EALC 801 Directed Readings (1-5). Designed to meet the needs of advanced students with credit in EALC 318.) LEC

EALC 801 Directed Readings and Research in Japanese (3). A survey in English of contemporary Japanese literature. Students will become familiar with the major authors, schools, and genres. An individual research project will be carried out in an area of the student’s special interest. (Not open to students with credit in EALC 316.) LEC

EALC 801 Directed Readings and Research in Japanese Literature (3). A high-level introduction to the traditional religions of Japan, with special emphasis on Japanese Buddhism. Texts to be used will include translations of original documents as well as secondary studies. Those students who have competence in Japanese will be required to do some readings in that language, but a knowledge of the language is not a prerequisite. LEC

EALC 801 Directed Readings and Research in Modern Japanese Literature (3). A high-level introduction to the traditional religions of Japan, with special emphasis on Japanese Buddhism. Texts to be used will include translations of original documents as well as secondary studies. Those students who have competence in Japanese will be required to do some readings in that language, but a knowledge of the language is not a prerequisite. LEC

EALC 801 Directed Readings and Research in Modern Chinese Literature (3). A general survey of the important writers of the 20th century and their works. Lectures, readings, and discussions in English. A knowledge of Chinese is not required. (Not open to students with credit in EALC 318.) LEC

EALC 801 Directed Readings and Research in Modern Chinese Literature (3). A general survey of the important writers of the 20th century and their works. Lectures, readings, and discussions in English. A knowledge of Chinese is not required. (Not open to students with credit in EALC 318.) LEC

EALC 890 Thesis (1-6). An inquiry into the source material upon a specific subject. THE

Japanese Courses

JPN 504 Advanced Modern Japanese I (3).
JPN 508 Advanced Modern Japanese II (3).
JPN 509 Business Japanese (3).
JPN 524 Introduction to Classical Japanese I (3).
JPN 544 Introduction to Classical Japanese II (3).
JPN 562 Modern Japanese Texts I (3).
JPN 564 Modern Japanese Texts II (3).
JPN 569 Advanced Business Japanese (3).
JPN 598 Readings in: _____ (1-3).
JPN 690 Seminar in: _____ (1-3).
JPN 801 Directed Readings and Research in Japanese (1-4). Advanced language training for the study of Japanese sources in the humanities or social science field of the student. Prerequisite: JPN 564 or consent of instructor. RSH

JPN 880 Advanced Japanese Research Materials (2). A detailed examination of various Japanese language reference works and research materials. Emphasis will be placed on the use of different types of reference works to carry out research strategies. Prerequisite: JPN 508 or equivalent and JPN 580. LEC

Korean Courses

KOR 504 Advanced Modern Korean I (5).
KOR 508 Advanced Modern Korean II (5).

The Center for East Asian Studies is a National Resource Center funded by the U.S. government for the study of East Asia.

KU’s Institute for Policy and Social Research brings together social scientists from such disciplines as economics, education, environmental studies, geography, political science, public administration, social welfare, sociology, and urban planning.
readings, and discussions in English. A knowledge of Chinese is not required.

EALC 716 Readings in Modern Japanese Literature (3). A survey in English of con-
temporary Japanese literature. Students will become familiar with the major authors,
schools, and genres. An individual research project will be carried out in an area of
the student's special interest. (Open only to students with credit in EALC 316.) LEC

EALC 718 Readings in Modern Chinese Literature (2-3). A general survey of the
important writers of the 20th century and their works. Lectures, readings, and dis-
cussions in English. A knowledge of Chinese is not required. (Open to students
with credit in EALC 318.) LEC

EALC 732 Seminar in Eastern Religious Thought: _____ (3). Analysis of the religious
thought of selected thinkers of India, China, and/or Japan, traditional and modern.
May be taken more than once if subject matter varies. (Same as REL 672.)
Prerequisite: REL 507, REL 508, REL 509, or permission of the instructor. LEC

EALC 733 Seminar in Eastern Religious Texts: _____ (3). Analysis of a selected re-
ligious text or texts from India, China, Japan, or Japan, in translation. May be taken
more than once if subject matter varies. (Same as REL 733.) Prerequisite: REL
507, REL 508, REL 509, or permission of the instructor. LEC

EALC 747 Teaching about East Asia (2). An advanced survey of the history, culture, and
contemporary affairs of China, Japan, and Korea, specifically designed for K-12 educa-
tors who wish to incorporate East Asian topics into their classroom teaching. Pedagogical
methods and resources for the study of East Asia will be emphasized. Topics covered will
address relevant benchmarks in the state curricular standards in social studies, themes
from the Advanced Placement world history examination, and the national standards in
world history. (Same as HIST 747.) Prerequisite: Approval of the instructor. LEC

EALC 762 Readings in Japanese Religion (3). A high-level introduction to the tradi-
tional religions of Japan, with special emphasis on Japanese Buddhism. Texts to be
used will include translations of original documents as well as secondary studies.
Those students who have competence in Japanese will be required to do some read-
ings in that language, but a knowledge of the language is not a prerequisite. LEC

people's life cycle through a combination of theoretical social scientific observations
of Japanese as a cultural group and personal literary descriptions of them. An individu-
al research paper is required. (Open to students with credit in EALC 366.) LEC

EALC 770 Seminar in EALC 318 and Society in Asia: _____ (3). Analysis of selected
Asian religions and their relationships to selected Asian societies. May be taken
more than once if subject matter varies. (Same as REL 776.) Prerequisite:
REL 507, REL 508, REL 509, or permission of the instructor. LEC

EALC 790 Topics in East Asian Languages and Cultures: _____ (1-3). Special topi-
cal courses covering a number of disciplines. Credit descriptions and prerequisites
will vary. NOTE: May be repeated for up to 12 total credits. RSH

EALC 801 Directed Readings (1-5). Designed to meet the needs of advanced stu-
dents whose study in East Asian studies cannot be met with regular courses.
Prerequisite: Instructor. RSH

EALC 899 Thesis (1-6). An inquiry into the source material upon a specific subject. THE

Japanese Courses

JPN 504 Advanced Modern Japanese I (3). 
JPN 508 Advanced Modern Japanese II (3).
JPN 509 Business Japanese (3).
JPN 542 Introduction to Classical Japanese I (3).
JPN 544 Introduction to Classical Japanese II (3).
JPN 562 Modern Japanese Texts I (3).
JPN 564 Modern Japanese Texts II (3).
JPN 569 Advanced Business Japanese (3).
JPN 598 Readings in: _____ (1-3).
JPN 690 Seminar in: _____ (1-3).
JPN 601 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).

The University of Kansas
Graduate Application Processing Center
Strong Hall, 1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

Send all other requested application materials to

The University of Kansas
Graduate Secretary, Department of Economics
Snow Hall, 1460 Jayhawk Blvd., Room 415
Lawrence, KS 66045-7523

Test of English as a Foreign Language or International English
Language Testing System Scores. Students whose native lan-
guage is not English usually have difficulty in the program un-
less their English is excellent. The university requires a score of
at least 520 on the individual paper-based TOEFL or 23 on the
computer-based TOEFL with a minimum part score no less than
53 paper-based or 20 computer-based. We also accept IELTS
with minimum band scores of 5.5 with no score below 5.0.

The Center for East Asian Studies is a National Resource Center funded by the U.S. government
for the study of East Asia.

KU's Institute for Policy and Social Research brings together social scientists from such
disciplines as economics, education, environmental studies, geography, political science,
public administration, social welfare, sociology, and urban planning.
**M.A. Degree Requirements**

The Master of Arts degree program serves students with little previous background in economics as well as students who majored in economics as undergraduates. The program provides maximum flexibility for students to pursue their own special interests. Candidates for the M.A. degree must complete a minimum of 30 semester hours of graduate work, consisting of 9 hours of required core classes, including ECON 700, ECON 701, ECON 715. At least 18 hours, inclusive of the required core courses, must be in economics; but students may take up to 12 hours in related areas, such as business administration, computer science, political science, or mathematics. No more than 9 hours may be taken at the 500 and 600 levels. At initial enrollment, each candidate must discuss a preliminary plan of study with his/her graduate adviser. This plan may be revised over time.

**Thesis and Nonthesis Options.** Candidates may pursue either a thesis or a nonthesis track. Students electing the thesis track must complete 24 hours of formal course work and 6 hours of thesis under the supervision of a thesis supervisor. This work is to be devoted to the completion of a satisfactory thesis. An oral examination is held on completion of the thesis. Students electing the nonthesis track must complete 30 hours of formal course work.

**Written Comprehensive Examination.** All candidates for the M.A. degree, including students enrolled in the M.A./J.D. program, must demonstrate proficiency in the application of economic theory through a written examination taken during the last semester of enrollment.

**M.A./J.D. Degree Program**

In this program a student can obtain both the Juris Doctor and the Master of Arts in economics in three years and one summer session. The requirements for the combined degree are as follows:

1. Admission to the M.A./J.D. degree program must be approved by the School of Law, the Department of Economics, and the College of Liberal Arts and Science.
2. The program requires 100 credit hours of course work, of which 82 hours must be completed in the Law School and 18 hours in the Department of Economics. The department gives credit toward the M.A. degree for 12 hours of pertinent work in the Law School, and the Law School counts 8 credit hours in economics toward the J.D. degree. The 8 hours of economics courses that count toward the J.D. degree can be chosen from certain courses numbered 500-799 and from all 800-900 level courses. Prerequisites continue to apply, as does the requirement that all 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. In addition, 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. The M.A./J.D. degree is a nonthesis degree in economics.
4. A written comprehensive examination in economics is required of all candidates for the M.A./J.D. degree.

**Ph.D. Degree Requirements**

**Course Requirements.** In addition to meeting general requirements, the Ph.D. candidate in economics must complete a minimum of 54 credit hours of course work, at least 48 of which must be in economics.

1. All Ph.D. candidates must complete these core courses in economic theory and quantitative methods:
   - ECON 800 Optimization Techniques I
   - ECON 801 Microeconomics I
   - ECON 802 Microeconomics II
   - ECON 809 Optimization Techniques II
   - ECON 810 Macroeconomics I
   - ECON 811 Macroeconomics II

2. Course work beyond these required core courses is a matter of choice for the student in consultation with his or her graduate adviser. The graduate adviser develops a program to assist the student in specialized interests. Each program must include a sufficiently broad range of topics in economics to prepare the student for comprehensive examinations.

**Qualifying Examinations.** Ph.D. degree aspirants must pass written qualifying examinations in microeconomics and macroeconomics after completion of the core courses in these areas, ordinarily at the beginning of the fourth semester of full-time study. A student who does not pass a qualifying examination may be permitted one retake, ordinarily at the end of the fourth semester of full-time study.

**Fields of Specialization.** Each student must demonstrate competence in at least two fields of specialization within economics. This is done by completing two courses in each of these areas. Current fields of specialization in the department include financial economics, economic development, industrial organization, international economics, labor economics, econometrics, economic history, economic theory, and macroeconomics.

**Third-year Paper.** Each student must complete a third-year seminar paper. This would typically be in one of the fields of specialization. Usually the third-year paper becomes part of the student’s doctoral dissertation.

**Comprehensive Oral Examination.** Upon completion of most of the course work and other requirements for the doctoral degree, inclusive of research skills and residency requirements, the student must prepare a dissertation proposal under the direction of a thesis adviser and pass a comprehensive oral examination related to the dissertation proposal.

**Dissertation.** Following the comprehensive oral examinations, the candidate must organize and write a dissertation on his or her chosen topic under the supervision of a dissertation committee.

**Final Oral Examination.** The candidate must defend the dissertation successfully in a final oral examination.

**Financial Aid**

Financial aid may be awarded in the form of Graduate Fellowships, Oswald Fellowships, Graduate Teaching Assistantships, or Graduate Research Assistantships. First consideration for financial aid is given to applications received before February 1. To be considered for GTAs, international students must include...
Economics

a score from the Test of Spoken English (TSE) or a TOEFL-iBT examination that includes a speech component.

Facilities and Services
In addition to KU computing and library facilities described in the Research and Academic Support chapter, students in the M.A. and Ph.D. programs may use the department’s computer laboratory, which provides access to a variety of databases and econometric software packages useful for economic research.

Economics Courses
ECON 505 History of Economic Analysis (3).
ECON 510 Energy Economics (3).
ECON 515 Income Distribution and Inequality (3).
ECON 516 Income Distribution and Inequality, Honors (3).
ECON 520 Microeconomics (3).
ECON 521 Microeconomics, Honors (3).
ECON 522 Macroeconomics (3).
ECON 523 Macroeconomics, Honors (3).
ECON 524 Managerial Economics (4).
ECON 525 Managerial Economics, Honors (4).
ECON 530 Economic Development (3).
ECON 535 Economic History of Europe (3).
ECON 536 Economic Issues of the European Union (3).
ECON 540 Recent American Economic History (3).
ECON 550 Environmental Economics (3).
ECON 560 Economic Systems (3).
ECON 562 The Russian Economy (3).
ECON 563 Current Economic Issues of East Europe (3).
ECON 564 Topics in Applied Economics: __________ (3).
ECON 582 Economic Development (3).
ECON 583 Economic Issues of East Asia (3).
ECON 584 Economic Development of Latin America (3).
ECON 586 Economic Issues in China (3).
ECON 587 Economic Development of Africa (3).
ECON 590 Game Theory (3).
ECON 600 Money and Banking (3).
ECON 604 International Trade (3).
ECON 605 International Finance (3).
ECON 609 Sports Economics (3).
ECON 610 Resource Economics and Environmental Policy (3).
ECON 620 Elements of Mathematical Economics (3).
ECON 622 Public Finance (3).
ECON 630 Industrial Organization and Antitrust Policy (3).
ECON 631 Economics of Regulation (3).
ECON 635 Science and Technology in Economic Growth (3).
ECON 640 Labor Economics (3).
ECON 675 Introduction to Welfare Economics (3).
ECON 680 Economic Growth (3).
ECON 700 Survey of Microeconomics (3). A comprehensive survey of microeconomics, including the theories of consumption, production, distribution, pricing, and resource allocation. Prerequisite: ECON 520 and MATH 116 or MATH 121; and completion of ECON 142 and ECON 144, ECON 520, and ECON 522 with a grade-point average of at least 3.0 or graduate standing. LEC
ECON 701 Survey of Macroeconomics (3). A comprehensive survey of the modern theory of national income determination with particular emphasis on the foundation of 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 Lausanne 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: DSCT 310 or its equivalent; MATH 116 or MATH 121; and completion of ECON 142 and ECON 144, ECON 520 and ECON 522 with a grade-point average of at least 3.0 (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 developments in microeconomic theory, emphasizing the importance of equilibrium, collusion, multi-plant and multi-product operations, regulated industries, and the empirical links between monopoly power and profitability. Prerequisite: ECON 630 or equivalent. LEC
ECON 735 Science and Technology in Economic Growth (3). An analytical and historical exploration of the roles that science and technology have played in the economic growth of industrial societies. Topics covered include factors influencing the pace and character of technological innovation, national systems of innovation, the diffusion of new technologies, measurement of the benefits of new technologies, and the role of technology in various growth theories. Prerequisite: ECON 520, or ECON 524, or consent of instructor. LEC
ECON 740 Theory of Economic Growth and Development (3). Advanced study of the theory of economic growth and development. Recent growth models, theory of underdevelopment, programming policies and plans for development. Prerequisite: ECON 520 and ECON 522. LEC
ECON 741 Economic Planning (3). A study of the techniques employed in the preparation of a national economic plan and of the policies required for its implementation. Special attention is given to the purposes of a plan, development strategies, investment requirements, and project appraisal. The development plans of several countries are examined to illustrate problems of planning economic development. Prerequisite: ECON 520 and ECON 522. LEC
ECON 750 The Theory of International Finance (2-3). This course examines the role of financial institutions in the international market approach to exchange rate determination as well as dynamic exchange rate models. Possible topics may include exchange rate overshooting, exchange rate crises, and international policy coordination. Prerequisite: ECON 605 and MATH 116. LEC
ECON 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 its application to urban and regional tax and expenditure problems and issues. Prerequisite: ECON 520 and ECON 522; 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 include: long-run economic growth, the rise of capitalist agriculture and industry, the causes and consequences of technological change; changes in income distribution and economic organization; and the social and cultural effects of economic change. Prerequisite: ECON 520, ECON 522, and ECON 535 or ECON 530, or consent of instructor. LEC
ECON 768 The Industrial Revolution (3). An examination of the development of the industrialization of England and its impact on the North Atlantic economy. Concern will be given to the effects of demographic and technological 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 using the theory of asset pricing. Topics include the general equilibrium 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: DSCT 301 and ECON 700 or equivalent. LEC
ECON 770 Economics of the Labor Market (3). A theoretical and empirical analysis of labor supply and demand, human capital, information and labor mobility, unemployment, discrimination, and union behavior and influence. Prerequisite: ECON 520 and MATH 115 and MATH 116. LEC
ECON 800 Optimization Techniques I (3). Economic models involving the maximization of a scalar (vector) function subject to equality and inequality constraint where the variables are in a finite dimensional Euclidean space. Characterization of optimal as well as dynamic exchange rate models. Possible topics may include exchange rate overshooting, exchange rate crises, and international policy coordination. Prerequisite: ECON 520 and ECON 522; ECON 622 recommended. LEC
ECON 801 Microeconomics I (3). An advanced course in price and distribution theory. Prerequisite: ECON 520 or consent of instructor. LEC
ECON 802 Microeconomics II (3). The study of the operation of the economic system taking into account the diversity of goods and services. Primary attention is centered upon 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 equilibria is studied. Prerequisite: ECON 520. LEC
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 Rantis-Fei development models; and other applications of growth theory to public policy. Prerequisite: ECON 700 and ECON 520. LEC
ECON 809 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 equality (inequality) con-
strains. Characterization of optimal paths by way of first and second derivatives. Existence and optimality. Prerequisite: Consent of instructor. LEC

ECON 810 Macroeconomics I (3). A survey of basic macroeconomic models, including Classical and Keynesian as well as more recent ones. Topics also cover monetary and fiscal stabilization policies, the role of rational expectations, and basic behavioral equations. Tradestyles of inflation and unemployment are examined both theoretically and empirically. Prerequisite: ECON 809 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. Microfoundations: household, firm, and government behavior. Energy policies and economic development. Prerequisite: ECON 801 or permission of instructor. LEC

ECON 817 Econometrics I (3). An intensive study of the general linear model and distribution theory associated with the multivariate normal; stochastic difference equation; auto-correlation, 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 economic growth. The Arrow-Debreu model will be reviewed and emphasis placed on the use of Kakutanis 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 included in perfect foresight models. Prerequisite: ECON 801. LEC

ECON 825 Tutorial (1-3). 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 may include mechanism design, market failure, monopoly, imperfect competition and oligopoly, limit pricing, predatory pricing, innovation and technical change, advertising and signaling theory, collusion and coordination, regulation under incomplete information, agency and auditing problems, incentives in hierarchies, job market signaling, insurance markets, nonlinear pricing and monopoly, and bargaining and long term relations. Prerequisite: ECON 801 and 802. RSH

ECON 831 Economics of Regulation (3). This course provides an analytical introduction to the study of the economic and public policy implications of explicit and implicit contracts. The Arrow-Debreu model will be reviewed and emphasis placed on the use of Kakutanis 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 included in perfect foresight models. Prerequisite: ECON 801. 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 and methodological differences among economic systems, such as capitalism, socialism, and centrally planned economies, will be examined. Prerequisites: ECON 801 and 802. RSH

ECON 840 Microeconomic Issues in Development Economics (3). This course will examine the process and policies of economic development from a microeconomic perspective. Selected topics may include: the use of input-output matrices in development planning; the role of foreign trade in development; inflation and stabilization in developing economies; the problem of foreign debt; the relationship between external 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 policy coordination, and properties of different international monetary arrangements. Prerequisite: ECON 811. LEC

ECON 851 The Theory of International Trade (3). The study of the pure theory of international trade: factor-price equalization, trade and welfare, general equilibrium in the international economy, comparative statics, and stability conditions. Prerequisite: ECON 700 and 701. LEC

ECON 852 The Theory of International Trade (3). The study of the pure theory of international trade: factor-price equalization, trade and welfare, general equilibrium in the international economy, comparative statics, and stability conditions. Prerequisite: ECON 700 and 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 economic problems of natural resource allocation over time. Prerequisite: ECON 700. LEC

ECON 860 Advanced Public Finance (3). A rigorous treatment of the economics of the public sector. Emphasis will be placed on government expenditure and taxation. Possible topics include tax incidence, optimal taxation, dynamic analysis of fiscal policy, public goods, and the political economy of the welfare state. 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 upon 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 theory, linear economics, decision theory, stability of economic equilibrium, comparative statics, etc. Prerequisite: Consent of instructor. LEC

ECON 899 Master's Thesis (1-10). This seminar-workshop is designed to study advanced research topics in the area of microeconomic and macroeconomic theory, and also provide assistance in the preparation and development of the dissertations of Ph.D. candidates in these areas of specialization. LEC

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 area of microeconomic and macroeconomic 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 study 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 Macroeconomic Theory (1-3). 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 critiqued. The function of commercial banks, nonbank 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 and time-series econometrics for use in applied macroeconomics, international finance, and development economics. Topics include empirical applications of ARCH models, VAR models (study of impulse response function and variance decomposition), unit-root 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 916 Advanced Econometrics II (3). A study of selected topics in applied time-series econometrics for use mainly in applied macroeconomics, international finance, and development economics. Topics include empirical applications of ARCH models, VAR models (study of impulse response function and variance decomposition), unit-root 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 917 Advanced Econometrics III (3). A study of structural and nonlinear time series approaches to econometric modeling and inference. The course emphasizes techniques needed to use economic theory in system-wide econometrics. Emphasis is placed on selection of functional form for approximation to theoretical functions and the use of duality theorems for derivation of the resulting econometric systems of equation. Inference with those models will be by nonlinear parametric, semi-parametric, and nonparametric methods. Prerequisite: ECON 818. LEC

ECON 920 Econometrics Seminar-workshop (1-3). 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 dissertation 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 economies, changing economies, and disaggregated and aggregated economies. Prerequisite: ECON 802. 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 with dissertations in a specific area of applied economics. 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. RSF

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). THE

English
Chair: Dorice Elliott, delliot@ku.edu
Wescoe Hall, 1445 Jayhawk Blvd., Room 3114 Lawrence, KS 66045-7590, www.english.ku.edu, (785) 864-4520
Associate Chair: Tom Lorenz, tlorenz@ku.edu, 3102 Wescoe Hall, (785) 864-4520

Director of Graduate Studies: Byron Caminero-Santangelo, bsantang@ku.edu, 3118 Wescoe Hall, (785) 864-2522

Professors: Atkins, Bergeron, Carothers, Casagrande, Cherniss, Devitt, Fowler, Graham, Hardin, S. Harris, Hartman, Johnson, Landsberg, Lim, Scott

Courtesy Professor: Clement


Associate Professors Emeriti: Arnold, Cook, Lichter, Oruch

Assistant Professors: Fitzgerald, Mielke, Rowlund, Unferth

Assistant Professors Emeriti: Cohn, Warders

The department offers a full graduate program, leading to the M.A. degree. M.F.A., and Ph.D. degrees.

Admission
To be admitted, a student must have a strong undergraduate record, particularly in the humanities. A grade-point average of at least 3.3 (on a 4.0 scale) normally is required. College courses should include at least 18 hours of junior/senior work in literature, and the student is encouraged to have a reading knowledge of an appropriate foreign language. Applicants are expected to have some familiarity with British and American literary history and the work of the major writers in English. More important than factual knowledge, however, is the ability to read significant texts sensitively and intelligently and to write good English prose. Candidates for admission must submit Graduate Record Examination scores in support of their applications.

Send one transcript of all completed college and university course work to

The University of Kansas
Graduate Application Processing Center
Strong Hall, 1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

Send one transcript and all other requested application materials to

The University of Kansas
Department of English
Wescoe Hall, 1445 Jayhawk Blvd., Room 3116
Lawrence, KS 66045-7590

M.A. Degree Requirements

While continuously enrolled, a student has a total of five years to complete the master’s. The candidate’s program should be arranged in consultation with the director of graduate studies or a member of the departmental committee on graduate studies. Students who elect to write a master’s thesis must enroll in ENGL 899. M.A. candidates in Options Ia, Ib, and II must take at least 15 hours of their course work, in addition to ENGL 800, at the 700, 800, and 900 levels.

Option Ia—Literature. Requirements include

• One graduate course in English Language/Literature in Old and Middle English, and one in English Literature 1500-1800

• One graduate course in each of two of the following: English Literature post 1800, American Literature, Composition/Rhetoric/Literary Theory

• Introduction to Literary Studies (taken at the first opportunity)

• A total of 30 hours in English courses carrying graduate credit. At least 15 of these, in addition to Introduction to Literary Studies, must be at the 700 level or above and must include at least one seminar passed with a grade of A or B.

Students electing the M.A. thesis take the final oral examination. For students electing the M.A. thesis, the thesis defense constitutes the final oral examination. Students may enroll in ENGL 899 (thesis/examination hours) as necessary, but 899 does not count toward the 30-hour course requirement.

Option Ib—Literature and Literary Theory. Requirements include

• One graduate course in English Language/Literature in Old and Middle English, or one in English Literature 1500-1800

• One graduate course in English Literature post 1800, or in American Literature

• Two graduate courses in literary theory

• Introduction to Literary Studies (taken at the first opportunity)

• A total of 30 hours in English courses carrying graduate credit. At least 15 of these, in addition to Introduction to Literary Studies, must be at the 700 level or above and must include at least one seminar passed with a grade of A or B.

Students electing the M.A. examination take the final oral examination. For students electing the M.A. thesis, the thesis de-
fense constitutes the final oral examination. Students may enroll in ENGL 899 (thesis/examination hours) as necessary, but 899 does not count toward the 30-hour course requirement.

**Option II—Language, Literature, and Composition.** Requirements include:

- Courses in literature: At least 6 hours, including at least 3 hours in English Literature 1500-1800, and 3 hours in either English literature post 1800 or American literature
- Courses in language and composition: At least 6 hours in English Language and/or in Composition/Rhetoric courses
- Introduction to Literary Studies
- A total of 30 hours in English courses carrying graduate credit. At least 15 of these, in addition to Introduction to Literary Studies, must be at the 700 level or above and must include at least one seminar passed with a grade of A or B. Students electing the M.A. examination take the final oral examination. For students electing the M.A. thesis, the thesis defense constitutes the final oral examination. Students may enroll in ENGL 899 (thesis/examination hours) as necessary, but 899 does not count toward the 30-hour course requirement.

No matter the option chosen, the student also must demonstrate reading knowledge of one of the following foreign languages: French, German, Greek, Hebrew, Italian, Japanese, Latin, Russian, Old English, or Spanish. In each option, a final oral examination is required—either an examination covering a list of required and selected texts or a thesis defense.

**M.F.A. Degree Requirements**

Requirements include:

- Four graduate courses in literature, English or American
- Four graduate courses (12 hours) in creative writing
- Seven to 9 hours in electives or practica chosen from graduate courses in the Department of English, or approved courses in another department
- ENGL 899 Thesis (15 hours). Original writing in prose fiction, poetry, drama, or nonfiction prose

**Ph.D. Degree Requirements**

Students entering the program with the B.A. have, while being continuously enrolled, eight years to complete the M.A. and Ph.D. combined. Students entering with the M.A. have five years to complete the Ph.D.

**Requirements for the Degree of Doctor of Philosophy in English**

1. Ph.D. candidates must earn 24 hours of credit in appropriate formal graduate courses beyond the M.A. At least 15 hours (in addition to Introduction to Literary Studies if not taken for the M.A.) of this course work must be taken from among courses offered by the Department of English at the 700 level and above.

2. Required courses: Introduction to Literary Studies and two seminars offered by the Department of English at KU beyond the M.A. Students with master’s degrees earned elsewhere may be required by the director of graduate studies, acting on behalf of the graduate committee, to take additional course work.

3. A reading knowledge of two of the following languages: French, German, Greek, Hebrew, Italian, Japanese, Latin, Russian, Old English, or Spanish, or demonstrated fluency in one of these.

4. A comprehensive examination, to be completed after satisfaction of formal course requirements. This examination, which has both written and oral components, consists of three areas of study.

5. In the semester following the comprehensive examination, a 90-minute dissertation proposal review, which is to provide formal direction for the dissertation.

6. At least one year of supervised quarter-time teaching for qualified candidates except for those who do not plan to undertake teaching careers or who have already had extensive teaching experience.


**English Courses**

ENGL 506 Science Fiction (3).
ENGL 508 Contemporary Literary Theory (3).
ENGL 520 History of the Book (3).
ENGL 528 African Literature: (3).
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 Nonfiction Writing II (3).
ENGL 562 Advanced Technical Writing I (3).
ENGL 563 Advanced Technical Writing II (3).
ENGL 564 Advanced Technical Editing (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).
ENGL 572 Women and Literature: (3).
ENGL 573 U.S. Latina/o 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: (3).
ENGL 587 American English (3).
ENGL 590 Studies in: (1-3).
ENGL 592 Survey of: (3).
ENGL 596 Technical Communication Internship (1-3).
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 Later 18th Century (3).
ENGL 646 British Drama of the Restoration and 18th Century (3).
ENGL 648 The 18th-century British Novel (3).
ENGL 650 Poetry of the Romantic Period (3).
ENGL 655 Poetry of the Victorian Period (3).
ENGL 658 The 19th-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 20th 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 modern criticism, in its historical context, from Plato and Aristotle to Samuel Johnson. LEC
ENGL 708 Literary Criticism after 1800 (3). An introduction to modern criticism, in its historical context, from Wordsworth and Coleridge to the present. The emphasis will be on major critics and predominant schools. LEC
ENGL 709 Critical Theory: Problems and Principles: (3). Study of a topic (such as mimesis, influence, deconstruction) that is important in critical theory. May be repeated for credit as topic varies. LEC
ENGL 710 Introduction to Old English (3). A study of the grammatical features of the earliest form of written English, with readings in Old English prose and poetry. LEC
ENGL 712 Beowulf (3). Prerequisite: An introductory course in Old English. LEC
ENGL 714 Middle English Literature (3). Reading of selected works in Middle English (exclusive of the works of Chaucer). LEC
ENGL 720 Chaucer: (3). Intensive study of either the Canterbury Tales or Troilus and Criseyde and the earlier poems. May be repeated for credit up to a maximum of six hours. LEC
ENGL 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 ad-
ENGL 915 Seminar in Medieval English Literature: _____ (3). Study may center on either Old or Middle English language and literature. Prerequisite: ENGL 800. LEC
ENGL 916 Seminar in Chaucer: _____ (3). Prerequisite: ENGL 800. LEC
ENGL 920 Seminar in Renaissance English Literature: _____ (3). Close study of one or two major authors or of a group of related works. Prerequisite: ENGL 800. LEC
ENGL 926 Seminar in Shakespeare: _____ (3). Prerequisite: ENGL 800. LEC
ENGL 932 Seminar in Milton: _____ (3). Prerequisite: ENGL 800. LEC
ENGL 940 Seminar in Restoration and 18th-century British Literature: _____ (3). One or two authors are read closely, or a group of related works is studied. Prerequisite: ENGL 800. LEC
ENGL 950 Seminar in 19th-century British Literature: _____ (3). Concentrated study of one or two major figures, or a group of significant writers, or an aspect of the literary scene. Prerequisite: ENGL 800. LEC
ENGL 960 Seminar in 20th-century British Literature: _____ (3). Concentrated study of one or two authors, or a group of significant writers, or an aspect of the literary scene. Prerequisite: ENGL 800. LEC
ENGL 970 Seminar in American Literature: _____ (3). Concentrated study of one or two authors or of historical periods or important movements. Prerequisite: ENGL 800. LEC
ENGL 974 Seminar in Literatures of Africa and the African Diaspora: _____ (3). Advanced study in a topic related to literature, language, and cultures of Africa and the African Diaspora, such as a concentrated study of one or two authors, a group of significant writers, an historical period or important movement, or an aspect of the literary or cultural history of Africa or the African Diaspora. May be repeated for credit as the topic varies. Prerequisite: ENGL 800. 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 a P and will be changed to an A, B, C, D, or F grade by the comprehensive examining committee at the completion of the examination. Does not count toward the residence requirement. Prerequisite: Consent of the Coordinator of Graduate Studies. RSH
ENGL 998 Investigation and Conference: _____ (1-6). Individual work in (a) language, (b) literature, (c) composition, or (d) the teaching of English, by properly qualified graduate students under the direction of appropriate members of the Graduate Faculty as assigned by the Graduate Director. Limited to 6 hours of credit toward the M.A. or Ph.D. degree; only on three-hour enrollment may substitute for a normal 3-hour course in the field distribution requirement. Normally offered for only up to three credit hours in any one enrollment. Permission of the supervising faculty member and of the Graduate Director required for enrollment. RSH
ENGL 999 Doctoral Dissertation (1-12). THE European Studies

European Studies

No graduate program in European studies is offered. The following courses may be taken for graduate credit.

European Studies Courses

EURS 500 Seminar in European Studies (3).
EURS 501 Senior Thesis in European Studies (3).
EURS 502 Senior Honors Thesis in European Studies (3).
EURS 503 Europe Today (3).
EURS 505 Studies in Exile Literature (3).
EURS 506 Culture and Politics of the Cold War in Western Europe (3).
EURS 507 Research in European Collections (1-3).
EURS 508 Politics and Economics of Cultural Production in Western Europe (3).
EURS 509 Introduction to the Study of Southern European Societies (3).
EURS 510 Scandinavian Life and Civilization (3).
EURS 511 Topics in European Studies: ____ (3).
EURS 512 Irish Culture (3).
EURS 536 Economic Issues of the European Union (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).
EURS 604 The European Union (3).

Evolutionary Biology

See Biological Sciences: Ecology and Evolutionary Biology.
French & Italian

Film/Media
See Theatre and Film.

French and Italian
Chair: Van Kelly
Wescoe Hall, 1445 Jayhawk Blvd., Room 2104
Lawrence, KS 66045-7590, www.frenchitalian.ku.edu, (785) 864-9062
Graduate Adviser: Caroline Jewers, 2068 Wescoe Hall, (785) 864-9076
Professors: Kozma, Pasco
Professors Emeriti: Dinneen, Johnson
Associate Professors: Booker, Fourny, Jewers, Kelly
Assistant Professors: Hayes, Sayeh, Scott, Swanson

The department offers a full graduate program leading to the M.A. and Ph.D. degrees with a major in French.

Admission
A minimum of 26 credit hours of French is required for admission, including college preparatory work, of which 8 hours must be advanced undergraduate course work in French literature. Results of the Graduate Record Examination general test are required for domestic applicants. Test of English as a Foreign Language or International English Language Testing System, and the Test of Spoken English are required for nondomestic applicants. If the Internet-based TOEFL is available in the student’s country, it is required (in lieu of paper-based TOEFL or IELTS, and the TSE). Please see www.international.ku.edu/~oip/students/mepr for minimum scores for the TOEFL and IELTS. Nondomestic applicants who wish to be considered for GTAs need to take the TSE and meet the required minimum.

Submit your application online at www.grad.ku.edu/GAPC. Send transcripts of all completed college and university course work to:

The University of Kansas
Graduate Application Processing Center
Strong Hall, 1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

Send all other requested application materials to:
The University of Kansas
Department of French and Italian
Wescoe Hall, 1445 Jayhawk Blvd., Room 2104
Lawrence, KS 66045-7590

M.A. Degree Requirements
1. Thirty credit hours, including
   • FREN 700 Old French
   • FREN 720 Introduction to Graduate Studies in French
   • FREN 610 Theme et Version or FREN 620 Expository French Writing
   • Two seminars of 3 hours each or a thesis (FREN 899, 6 hours)
   • FREN 704 Methods in French Language Instruction
2. A reading knowledge of Greek, Latin, German, or a second Romance language.
3. Comprehensive written and oral examinations.

Ph.D. Degree Requirements
Prerequisite. Completion of the M.A. degree at KU or a comparable institution. Applicants holding the M.A. in a discipline other than French may be required to take a qualifying examination.

Requirements. The following requirements are in addition to general requirements and those outlined above for the master’s degree in French.
1. Thirty hours beyond the M.A. (excluding dissertation hours).
2. FREN 810 Criticism and Critical Methods.
3. A knowledge of a non-Romance language and of a Romance language other than French. The language presented for the M.A. is accepted as one of these. For one language, the candidate must demonstrate proficiency equivalent to completion of a second-semester course or complete the final graduate reading course in that language. For the other language, the student must demonstrate proficiency equivalent to completion of a fourth-semester course.
4. A satisfactory command of written and spoken French and a reasonable familiarity with the history and civilization of France.
5. The completion of at least one year of half-time teaching in the department.
6. Such courses as the department may prescribe to ensure a broad grasp of the major field and the proper preparation for original research in the specific area of the dissertation. The comprehensive examinations in French are both written and oral.

Financial Aid
The department offers graduate teaching assistantships to students pursuing graduate degrees. In addition, graduate students are eligible to apply for graduate fellowships (see Fellowships and Scholarships in the Graduate Studies chapter of this catalog) and for KU Direct Exchange Scholarships to France. The department also offers a number of awards for excellence in academic work and teaching.

French Courses
FREN 500 Advanced French Phonetics (3).
FREN 530 Studies in Film: (3).
FREN 592 French Culture Through Film I, Beginnings to 1950 (3).
FREN 593 French Culture Through Film II, 1950–Present (3).
FREN 600 Studies in: _____ (3).
FREN 610 Thème et Version (3).
FREN 620 Expository French Writing (3).
FREN 680 Language Teaching and Advanced Conversation (2-3).
FREN 681 Language Teaching for Oral Proficiency (1).
FREN 700 Old French (3). Introduction to grammar and structure through the reading of representative works. LEC.
FREN 701 History of the French Language (3). Major aspects of development and growth. Conducted in English. LEC.
FREN 702 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 704 Methods in French Language Instruction (3). This course provides an overview of current and historical approaches to foreign language teaching, with reference to the instruction of French. Past and current trends and methodologies of language instruction are examined in order to acquaint students with various classroom approaches. Research findings in second language acquisition are explored and their implications discussed so as to show how these findings lead to more effective classroom practices. LEC.
FREN 720 Introduction to Graduate Studies in French (3). An introduction to the skills required of students doing graduate degrees in French literature; areas covered are 1) introduction to literary theory and criticism, 2) bibliography and 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 recuills, on poetic theory, and on the relation of poetry to other genres and media may be incorporated. LEC

FREN 732 Francophone Studies (3). Selected movements, themes, genres, topics in the cultures and/or literatures of the French-speaking world outside France. May be repeated for credit. LEC

FREN 740 Medieval French Literature (3). Literary history of the period, with discussion of representative works read for the most part in the original old French. LEC

FREN 750 French Literature of the 16th Century (3). A survey of the major writers, covering Rabelais, Scève, Louise Labé, Marguerite de Navarre, Ronsard, Du Bellay, Montaigne, and d’Aubigné. LEC

FREN 763 French Drama of the 17th Century (3). Development of baroque and classical French drama, with emphasis on Corneille, Molière, and Racine. LEC

FREN 765 Nondramatic French Literature of the 17th Century (3). Esthetics of baroque and classicism. Emphasis on Descartes, Pascal, La Rochefoucauld, Mme de Lafayette, although other authors may be studied. LEC

FREN 770 French Literature of the 18th Century (3). Special attention paid to Montesquieu, Voltaire, Diderot, and Rousseau; also development of novel and drama. LEC

FREN 782 French Novel of the 19th Century (3). Emphasis on major novelists of the century: Balzac, Stendhal, Flaubert, and Zola. LEC

FREN 785 French Romantic Movement (3). Major Romantic writer viewed in context of intellectual, aesthetic, 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, Célestin, Giraudoux, Claudel, Sartre, and Camus. LEC

FREN 792 Proust (3). Principal movements, structures, and tensions of A la recherche du temps perdu. LEC

FREN 799 Masters Seminar (1). To meet Masters degree requirement for continuous enrollment. This course will be graded satisfactory/unsatisfactory. FLD

FREN 800 Studies in: (3). Study of topics not limited to one century. May be repeated for credit. LEC

FREN 810 Criticism and Critical Methods (3). Literary criticism from historical, 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 842 Arthurian Literature in France (3). Origins and development of Arthurian legend; analysis of major texts. Prerequisite: FREN 700. LEC

FREN 848 Studies in Medieval French Literature: (3). Various movements, themes, or genres. May be repeated for credit. Prerequisite: FREN 700. LEC

FREN 850 Early Renaissance Literature (3). Emphasis on Rabelais, Marguerite de Navarre, Marot, Maurice Scève and Louise Labé. LEC

FREN 858 Studies in 16th-century French Literature: (3). Various movements, themes, or genres. May be repeated for credit. LEC

FREN 868 Studies in 17th-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 the 18th century as reflected in literature. Emphasis on philosophies, with discussion of external influences. LEC

FREN 872 Novel of the 18th Century in France (3). Origins and development to Revolution; thematic analysis with attention to critical attitudes and their influence upon evolution of novel as genre. LEC

FREN 877 Studies in 18th-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 symbolists poets, including Baudelaire, Verlaine, Rimbaud, Mallarmé, and Valéry. LEC

FREN 888 Studies in 19th-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 20th-century French Literature: (3). Various movements, themes, or genres. May be repeated for credit. LEC

FREN 899 M.A. Thesis (1-6). THE

FREN 900 Seminar in French (3). Topics in literary, linguistic, and cultural research. May be repeated for credit. LEC

FREN 995 Investigation and Conference (1-3). Readings and research projects in French language, literature, and culture. Directed work to fulfill needs not met by available courses. One-three hours credit in any semester. Maximum credit for M.A.: Three hours. By special departmental permission only. RSH

FREN 999 Ph.D. Dissertation (1-12). THE

Italian Courses

ITAL 502 Dante’s Divine Comedy I (3).
ITAL 503 Dante’s Divine Comedy II (3).
ITAL 695 Studies in Italian Literature (1-3).

Genetics

See Biological Sciences.

Geography

Chair: Terry Slocum
Associate Chair: Johannes Feddema
Lindley Hall, 1475 Jayhawk Blvd., Room 213
Lawrence, KS 66045-7613, www.geog.ku.edu, (785) 864-5143
Graduate Adviser: Steve Egbert, 219C Lindley Hall, (785) 864-4252
Professors: Braaten, Dobson, Feddema, Johnson, Price, Shortridge, Sorenson, Woods

Professors Emeriti: Dienes, McColl, Nunley
Associate Professors: Brown, Egbert, Herlihy, McCleary, Myers, O’Lear, Slocum, Tucker, van der Veen
Assistant Professors: Brunsell, Cheong, Li, Mcherm

The graduate curriculum emphasizes solid general training but encourages commitment to concentrations. Students are encouraged to take extradepartmental course work that complements their degree programs. Credit-hour requirements below are considered a minimum for degree programs. Programs are tailored by the student and adviser to conform to the student’s interests and needs, as well as the general degree requirements.

The central thrust of the department and the chief capabilities and interests of the staff falls within these research-teaching areas: (1) cultural/regional geography including Africa, East Asia, Russia, Latin America, and the United States; (2) physical geography including geomorphology, soils, and plant geography; (3) atmospheric science and climatology; and (4) geographic information science including cartography, geographic information systems, and remote sensing.

Admission

Applicants without prior training in geography are welcome but are required to improve their basic knowledge of the broad divisions of geography: systematic, methodological, and regional. Courses taken to remedy deficiencies may not count toward graduate degrees. Graduate Record Examination scores (verbal, quantitative, and analytical) are required of all applicants.

Submit your application online at wwwgraduate.ku.edu/GAPC.
Send transcripts of all completed college and university courses work to

The University of Kansas
Graduate Application Processing Center
Strong Hall, 1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535
Send all other requested application materials to

The University of Kansas
Department of Geography
Lindley Hall, 1475 Jayhawk Blvd., Room 213
Lawrence, KS 66045-7613

Handbook for Graduate Students

Detailed information on departmental regulations is included in Graduate Study in Geography at the University of Kansas, available from the departmental office or online at www.geog.ku.edu.
M.A. Degree Requirements
The program continues the general training of the undergraduate degree but also provides for concentration in preparation either for employment or further study. The student takes courses in several areas of the discipline as well as at least three courses in an acceptable concentration. The 30-credit-hour minimum for the M.A. thesis program may include 6 hours outside the department and a maximum of 6 hours for the master's thesis. The M.A. degree requires a final oral examination. Students with 6 or more hours of Incomplete are denied permission to enroll until these hours are reduced to the allowable limit (5 hours).

Ph.D. Degree Requirements
The aspirant is expected to demonstrate proficiency in research and achieve a teaching competence in geography. The student may concentrate in one area or may offer a concentration in a second area in the department or an outside discipline. Whatever the choice, the student develops the plan of research and study with the advice and supervision of professors in the chosen area(s) of concentration who also sit on the student's examination and dissertation committees. A minimum of 30 hours of course and seminar work in addition to dissertation credit usually is required beyond the M.A.

There are several options for satisfying the Foreign Language or Other Research Skills requirement (see Doctoral Degree Requirements, Research Skills in the General Information chapter of this catalog), which must be completed before the aspirant can be admitted to the comprehensive examinations. Possible options for meeting the requirement include those below.

1. Demonstrate a reading knowledge of two foreign languages relevant to the student’s research interest. For each language, the student must attain a level of competence to satisfy general requirements.

2. For a single foreign language, demonstrate a reading, writing, and speaking capability sufficient to enable the aspirant to do field work without an interpreter. An examination for competence, including written and oral portions, is conducted by a member of the department having expertise in that language or by an examiner from the appropriate language department.

3. Demonstrate a reading knowledge in one foreign language and a satisfactory capability in one research skill as listed below under 4a, 4b, 4c, and 4d.

4. Demonstrate a satisfactory capability in two research skills from the list below. The requirements are to be approved by the adviser with the agreement of the student affairs committee.
   (a) Computer science: Complete a computer course in electrical engineering and computer science (e.g., C++, Fortran, or visual Basic) and create a substantial computer program that illustrates a geographic application of that language. Both the course and the computer program must be approved by the computer programming committee of the Department of Geography.
   (b) Mathematics: Pass 9 hours of courses at the 500 level or above.
   (c) Statistics: Pass 9 hours of courses outside the geography department at the 500 level or above.
   (d) Demonstrate research capability in a field relevant to the aspirant's field(s) of specialization within geography. Examples are economics, sociology, psychology, geology, anthropology, and history. This involves at least 9 credit hours of graduate-level work, normally at KU, including a minimum of one research seminar.

The general requirement of two semesters (or one semester and one summer) of residence in full-time academic pursuits also must be met 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

KU has one of the strongest reputations in physical geography in the nation. Geographers trained at KU are now on faculties at major institutions throughout the country.

Some departments do not offer all courses in any one semester. See the online Schedule of Classes at www.registrar.ku.edu for current course offerings.
Some of the foremost cultural and regional geographers in the nation are faculty members at KU. Geography at KU has long been a leader in cartography, geographic information systems, and remote sensing.
GEOG 802 Urban Geographic Information Systems (3). An advanced survey of urban GIS, 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 310 and GEOG 358 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 advisor provide assistance, guidance and evaluation of progress in the professional experience. A written summary of the experience or outcomes of the research project are prepared independently by the student, a representative of the host agency, and the advisor. Total credit not to exceed six hours. Prerequisite: Twelve hours of graduate level geography courses and consent of program committee. FLD

GEOG 898 Readings in Geography (1-4). RSH

GEOG 899 Master's Thesis (1-10). THE

GEOG 911 Seminar in Cartography: ______ (1-4). Study of selected topics in cartography. Can be repeated for different topics. Prerequisite: GEOG 513 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 930 Seminar in Soil Geography (2-3). Subject matter varies but focuses on modern concepts and trends in soil geography. Sample topics include classification, paleopedology, and soil genesis. Field trip and fee may be required. Prerequisite: GEOG 725 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 development 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, political patterns, and political ecology. Topic will be specified in advance. Prerequisite: GEOG 727 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 725 or consent of instructor. LEC

GEOG 980 Seminar in Geography: ______ (1-3). LEC

GEOG 990 Seminar in Regional Geography: ______ (1-3). (Selected areas to be specified.) LEC

GEOG 998 Research in Geography (1-5). RSH

GEOG 999 Doctoral Dissertation (1-10). THE

Geology

Chair: Robert H. Goldstein, (785) 864-2738
Lindley Hall, 1475 Jayhawk Blvd., Room 120
Lawrence, KS 66045-7613, www.geol.ksu.edu, (785) 864-4974
Graduate Adviser: Ross A. Black, 316A Lindley Hall, (785) 864-2740

Professors: Goldstein, Lieberman, McElwee, Seldev, Steeples, Walker
Professors Emeriti: Angino, Dellwig, Dort, Enos, Hambleton, Kaesler, Merrill, Robison, Rowell, Van Schmus
Research Professor: Dreschhoff

Courtesy Professors: Butler, Doveton, Fransen, Gerhard, Kristalka, Martin, Sophocleous, E. Taylor, T. Taylor, Watney, Whittmore
Associate Professors: Black, Devlin, Gonzalez, Hasiotis, Kamola, Macpherson, Stockli, Walton

 Courtesy Associate Professors: Mandel, Miller
Assistant Professors: Fowle, Olcott, Roberts, M. Taylor, Tsouflas

Courtesy Assistant Professor: Macfarlane

The department offers the M.S. and Ph.D. in geology but permits specialization in a number of areas of geology and in geophysics and hydrogeology. Active areas of instruction and research include geophysics, geomorphology, geochemistry, microbial bio-geochemistry, paleontology, sedimentology, tectonics, and petroleum geology. Students also may work with faculty supervisors at the Kansas Geological Survey and at Kansas State University.

Admission

Admission is based on academic records including grade-point average and general preparedness in geology and supporting sciences, letters of recommendation, and the applicant’s stated academic and professional interests and goals. Results of the aptitude tests of the Graduate Record Examination are required. An attempt is made to balance the interests of students with the availability of faculty members to supervise them and laboratory space in which they may work. Consequently, new admissions in areas of geology that are heavily subscribed or in which the department has little expertise may be limited. As a result, some students who meet KU’s minimum standard for admission may be refused. Students who do not hold master’s degrees in geology normally are admitted to pursue the master’s degree. Students with exceptional records may be invited to study for the Ph.D. without first earning the M.S. degree.

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Degree Requirements

Details of the regulations on graduate study are included in the department’s Ground Rules for Graduate Students, available from the department office.

Prerequisites include credit in one year each of general biology, general chemistry, general physics, and calculus; plus junior- or senior-level courses in mineralogy, petrology, structural geology, paleontology, stratigraphy, geophysics, and a summer course in field geology. Students planning to specialize in geo-
physics also should have more advanced backgrounds in calculus and physics. Incoming graduate students meet with a departmental advisory review committee before enrollment to identify deficiencies and strengths and to set up curricula aimed at providing a broad background in geology at the intermediate to advanced level during the first year. Some deficiencies may be waived at this time if they are deemed nonessential.

Geology has many subdisciplines, and the department tailors each student’s curriculum to the needs of the individual. There is no departmental core curriculum or list of required courses.

**Thesis Option (M.S. Degree).** The master’s degree curriculum requires completion of 30 credit hours, including up to 6 credit hours for thesis research and an acceptable master’s thesis. The student sets the curriculum in consultation with a three-member advisory committee selected from the graduate faculty and approved by the graduate adviser. Course work counted toward the degree must be distributed so as to provide a comprehensive general knowledge of geology in addition to specialized knowledge required for the thesis. It may include courses in departments other than geology.

Although the department does not award a master’s degree in geophysics, students can specialize in geophysics at the master’s level. A similar arrangement is possible in the Department of Physics and Astronomy. This specialization is overseen by a committee with representatives from the Department of Physics and Astronomy, the Kansas Geological Survey, and the Department of Geology. The committee recommends requirements for the specialty degree and coordinates educational activities in geophysics. Research is supervised by departmental faculty members as well as by adjunct faculty members who are staff members of the Kansas Geological Survey. Similar arrangements can be made for students wishing to specialize in hydrogeology or paleontology.

The student must maintain a 3.0 grade-point average in geology and supporting science courses and pass a final oral general examination with emphasis on the areas of geology relevant to the thesis project. This examination may be repeated once, if necessary.

**Nonthesis Option (M.S. Degree).** A student may complete an M.S. degree program based primarily on course work and specialized skills. For this degree, a minimum of 36 credit hours of graduate-level study must be completed, including two written reports based on small projects. The student determines the structure of the project in consultation with an advisory committee of five faculty members. A student must declare an intention to follow the nonthesis option during the first semester of graduate study. The nonthesis degree is a terminal degree and normally cannot lead to doctoral study. In addition to maintaining a 3.0 grade-point average in course work, the student must demonstrate proficiency in the areas of geology covered by the program. This is accomplished by satisfactory performance on a series of written examinations assembled and administered by the advisory committee. These constitute the final examination for the degree and may be repeated once, if necessary.

During or after the period of residence, a student who wishes to change to an M.S. (thesis) program or a Ph.D. program must petition the graduate studies committee.

**Ph.D. 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 two semesters may be invited to proceed directly toward the doctorate.

The student’s advisory committee and the student construct a curriculum that offers the best preparation for the chosen field of interest and satisfies the research skills requirement. Each student is expected to enroll in courses in supporting fields to develop a multidisciplinary approach to geology.

**Research Skills.** The department does not require specific foreign languages or other research skills for the Ph.D. Instead it gives 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 research skills requirement by taking a curriculum or by completing a combination of languages, research skills, and courses. The curriculum in lieu of research skills is normally at least three graduate-level courses outside the department that are relevant to the specialty. The curriculum must be approved by the graduate adviser, and a list of these courses must be in the student’s file. This curriculum or the research skills must be completed before the oral comprehensive examination can be taken.

**Admission to Candidacy.** To be admitted to Ph.D. candidacy, a student must pass an oral comprehensive examination on the specialty in geology in which the student is doing doctoral research and on other relevant areas of geology or supporting sciences. The student must prepare and have approved a research proposal based on the doctoral research project before the oral comprehensive examination. The examination is based on the material presented in the proposal and its application to geology in general. The examination is conducted by a five-member faculty committee; one member of the committee must be from a department other than geology and is appointed by Graduate Studies on recommendation of the department. This committee is also responsible for conducting a final oral examination based on the doctoral dissertation. A three-person committee supervises research and preparation for the dissertation.

**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, contact the department graduate adviser.

**Financial Aid**

All prospective students are considered for employment and financial aid. Employment may be in the form of teaching assistant-
ships or research assistantships. Research assistantships may be supported with funds from external grants, Geology Associates endowments, the Biodiversity Institute, or the Kansas Geological Survey, which is on campus. Duties, compensation, and conditions of awards are prescribed as much as possible before enrollment. The department also receives funds from corporations and endowments to support fellowships, which permit students to enroll full time without specific research or teaching duties.

Graduate students are eligible for scholarships from the Geology Associates Program. Endowed scholarships include the Angino, Hall, Henbest, Holden, Ireland, McGee, Moore, Patterson, Peoples, and Walters scholarship funds. Other scholarships are awarded from donations from individuals and corporations. Scholarships are awarded on the basis of academic excellence; some funds are designated for protected 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 underwrites partially some other research expenses, such as purchase of time on analytical equipment. Funding requires an acceptable thesis or dissertation proposal. Students who have no other sources of research support from the department or university are given preference. Degree-seeking students may apply for loans from the Fritz, Horner, and Johns loan funds.

**Geology Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOL 512</td>
<td>Igneous and Metamorphic Petrology</td>
<td>3</td>
</tr>
<tr>
<td>GEOL 513</td>
<td>Petrology Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>GEOL 521</td>
<td>Paleontology</td>
<td>3</td>
</tr>
<tr>
<td>GEOL 523</td>
<td>Paleontology Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>GEOL 528</td>
<td>The Biology and Evolution of Fossil Plants</td>
<td>3</td>
</tr>
<tr>
<td>GEOL 529</td>
<td>Laboratory in Paleobotany</td>
<td>1</td>
</tr>
<tr>
<td>GEOL 532</td>
<td>Stratigraphy</td>
<td>4</td>
</tr>
<tr>
<td>GEOL 535</td>
<td>Petroleum and Subsurface Geology</td>
<td>4</td>
</tr>
<tr>
<td>GEOL 536</td>
<td>Geological Log Analysis</td>
<td>1</td>
</tr>
<tr>
<td>GEOL 541</td>
<td>Geomorphology</td>
<td>4</td>
</tr>
<tr>
<td>GEOL 551</td>
<td>Engineering Geology</td>
<td>3</td>
</tr>
<tr>
<td>GEOL 552</td>
<td>Introduction to Hydrogeology</td>
<td>3</td>
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<tr>
<td>GEOL 560</td>
<td>Introductory Field Geology</td>
<td>3</td>
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<tr>
<td>GEOL 561</td>
<td>Field Geology</td>
<td>3</td>
</tr>
<tr>
<td>GEOL 562</td>
<td>Structural Geology</td>
<td>4</td>
</tr>
<tr>
<td>GEOL 571</td>
<td>Natural Disasters</td>
<td>2-3</td>
</tr>
<tr>
<td>GEOL 572</td>
<td>Geophysics</td>
<td>3</td>
</tr>
<tr>
<td>GEOL 573</td>
<td>Geodynamics and Plate Tectonics</td>
<td>3</td>
</tr>
<tr>
<td>GEOL 575</td>
<td>Seismic Exploration</td>
<td>3</td>
</tr>
<tr>
<td>GEOL 576</td>
<td>Potential Fields Exploration</td>
<td>3</td>
</tr>
<tr>
<td>GEOL 577</td>
<td>Environmental Geophysics</td>
<td>3</td>
</tr>
<tr>
<td>GEOL 591</td>
<td>Topics in Geology</td>
<td>(1-5)</td>
</tr>
<tr>
<td>GEOL 711</td>
<td>X-ray Analysis</td>
<td>(1-2)</td>
</tr>
<tr>
<td>GEOL 712</td>
<td>Microstructures and Petrofabrics</td>
<td>3</td>
</tr>
<tr>
<td>GEOL 713</td>
<td>Advanced Petrology</td>
<td>3</td>
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<tr>
<td>GEOL 714</td>
<td>Thermochronology</td>
<td>3</td>
</tr>
<tr>
<td>GEOL 715</td>
<td>Geochemistry</td>
<td>3</td>
</tr>
<tr>
<td>GEOL 716</td>
<td>Geologic Thermodynamics</td>
<td>2</td>
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<tr>
<td>GEOL 717</td>
<td>Geochronology</td>
<td>2-4</td>
</tr>
<tr>
<td>GEOL 718</td>
<td>Stable Isotope Geochemistry</td>
<td>(1-3)</td>
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<tr>
<td>GEOL 719</td>
<td>Micropalaeontology</td>
<td>3</td>
</tr>
<tr>
<td>GEOL 720</td>
<td>Palaeoecology</td>
<td>3</td>
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<tr>
<td>GEOL 721</td>
<td>Palaeontology Museum Apprenticeship</td>
<td>1-6</td>
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<tr>
<td>GEOL 722</td>
<td>Paleontology of Lower Vertebrates</td>
<td>3</td>
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<tr>
<td>GEOL 723</td>
<td>Paleontology of Higher Vertebrates</td>
<td>3</td>
</tr>
<tr>
<td>GEOL 724</td>
<td>Paleobiogeography</td>
<td>3</td>
</tr>
<tr>
<td>GEOL 725</td>
<td>Paleoclimatology</td>
<td>3</td>
</tr>
<tr>
<td>GEOL 726</td>
<td>Paleogeography</td>
<td>3</td>
</tr>
<tr>
<td>GEOL 727</td>
<td>Macroevolution</td>
<td>3</td>
</tr>
<tr>
<td>GEOL 728</td>
<td>Paleopedology</td>
<td>3</td>
</tr>
<tr>
<td>GEOL 729</td>
<td>Paleobotany</td>
<td>3</td>
</tr>
<tr>
<td>GEOL 730</td>
<td>Geochronology</td>
<td>3</td>
</tr>
<tr>
<td>GEOL 731</td>
<td>Terrigenous Depositional Systems</td>
<td>3</td>
</tr>
<tr>
<td>GEOL 732</td>
<td>Carbonate Depositional Systems</td>
<td>3</td>
</tr>
<tr>
<td>GEOL 733</td>
<td>Hydrogeology</td>
<td>3</td>
</tr>
<tr>
<td>GEOL 734</td>
<td>Physical Hydrogeology</td>
<td>3</td>
</tr>
</tbody>
</table>

Scholarships are awarded on the basis of academic excellence; some funds are designated for protected minorities or women.
unsaturated zone sampling and measurement, and commonly used geophysical tech-
niques. Focus for data collection and analysis. Prerequisite: Observer course in hydrogeology and familiarity with computer use, or consent of instructor. LEC

GEOL 753 Chemical Hydrogeology (3). A study of natural groundwater chemistry and an introduction to groundwater contamination chemistry, including discussion of origin of contaminants, evolution, and solubility behavior of speciation, solubility, sorp-
tion, ion exchange, and oxidation-reduction processes. Effects on groundwater qual-
ity, water-rock interactions (diagnosis), and surface-water interactions are included. (Same as CE 727.) Prerequisite: One year of chemistry, one year of calculus, and an introduction to mineralogy or equivalent, or consent of instructor. LEC

GEOL 754 Contaminant Transport (3). A study of the transport of conservative and non-conservative pollutants in subsurface waters. Case studies are used to illus-
trate and develop a conceptual understanding of such processes as diffusion, ad-
vective-dispersive transport, chemical reactions, and biogeochemical reactions. Computer
models are developed and used to quantify these processes and gain an apprecia-
tion of modeling limitations. (Same as CE 772.) Prerequisite: Introductory course in hydrogeology or equivalent, or consent of instructor. LEC

GEOL 761 Regional Field Geology (1-5). A detailed field study of a carefully selected
area that includes features of several phases of geology. Field trip fee. Pre-
requisite: GEOL 561 or equivalent and departmental approval. LEC

GEOL 763 Tectonics and Regional Geology (3). Topics vary with demand and in-
clude fundamental features of plate tectonics, interpretation and distribution of re-

gional geology of mountain belts with emphasis on tectonic setting and processes,
regional geology, and tectonics of selected mountain belts. Prerequisite: GEOL 562,
GEOL 512, or GEOL 331, and GEOL 572. LEC

GEOL 772 Advanced Geophysics (1-3). Topics to vary with demand and include
heat flow, wave propagation, synthetic seismograms, groundwater exploration, ge-
othermal exploration, electrical methods in exploration, rock mechanics-tectonophysics,
rock magnetism, geomagnetism, paleomagnetism, geophysical inverse theory, and oth-
ers upon completion of demand. May be repeated for different topics. (Same as PHSX 722.)
Prerequisite: GEOL 572 or GEOL 573/PHSX 525 or consent of instructor. LEC

GEOL 772 Geophysical Data Analysis (3). Fourier analysis, sampling theory, predic-
tion and interpolation of geophysical data, filtering theory, correlation techniques,
decomposition. Examples will be chosen from various fields of geophysics. (Same
as PHSX 722.) Prerequisite: MATH 250/250/ARCE 250/CE 250/C&PE 250/ECECS 250/
ECECS 250/ECECS 250/ME 250 and either GEOL 572 or GEOL 573 or PHSX 525. LEC

GEOL 773 Seismology (3). General theory of seismic waves, wave field extrapola-
tion (migration) by finite difference methods, construction of travel-time curves,
reflection and attenuation of coefficients, earthquake source mechanism, distribu-
tion and forecasting of earthquakes. (Same as PHSX 723.) Prerequisite: MATH 250/
250/ARCE 250/CE 250/C&PE 250/ECECS 250/ECECS 250/ECECS 250/ME 250 and ei-
ther GEOL 572 or GEOL 573 or PHSX 525. LEC

GEOL 774 Finite Difference Methods for Geophysics (2-3). Application of finite
difference methods to solve the partial differential equations that commonly occur
in the study of geophysics. Representative examples will be drawn from ground-
water flow, gravity and magnetics modeling, and seismic wave propagation. Em-
phasis will be on obtaining actual solutions for practical problems. Prerequisite:
MATH 250, or MATH 320, or consent of the instructor. LEC

GEOL 775 Near-surface Seismology (3). Theoretical and applied study of all as-
pects of near-surface seismology, reflection, and surface-wave seismology, from struc-
ture and sign acquisition to interpretation. Prerequisite: GEOL 572, or con-
sent of the instructor. LEC

GEOL 780 Conservation Principles and Practices (3). This course will acquaint the fu-
ture museum professional with principles in conserving all types of collections. Prerequisites:
Field study methods will be discussed, as well as current practices regarding
conservation techniques. Emphasis will be placed on detection and identifica-
tion of causes of deterioration in objects made of organic and inorganic materials, and
how these problems can be prevented for different types of objects. Prerequisite:
(Same as AMS 714, BIOL 700, HIST 722 and MUSE 706.) Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC

GEOL 781 Introduction to Museum Exhibits (3). This course will consider the role of exhibits as an integrated part of museum collection management, research, and pub-
lic service. Lecture and discussion will focus on issues involved in planning and pro-
ducing 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, HIST 722, and MUSE 703.) Prerequisite: Museum Studies stu-
dent, Indigenous Nations Studies student, or consent of instructor. LEC

GEOL 782 The Nature of Museums (3). The purpose of this course is to provide an overview of the kinds of museums, their various missions, and their characteris-
tics and potentials as research, education, and public service institutions responsi-
ble for collections of natural and cultural objects. (Same as AMS 720, BIOL 788,
HIST 720, and MUSE 702.) Prerequisite: Museum Studies student, Indigenous Na-
tions Studies student, student of instructor. LEC

GEOL 783 Museum Management (3). Lecture, discussion, and laboratory exer-
cises on the nature of museums as organizations; accounting, budget cycles, per-
sonnel management, and related topics will be presented using, as appropriate,
case studies and sample museum organization models. (Same as AMS 731, BIOL 785, HIST 728, and MUSE 701.) Prerequisite: Museum Studies student, In-
digenous Nations Studies student, or consent of instructor. LEC

GEOL 784 Introduction to Museum Public Education (3). Consideration of the goals of an institution’s public education services and programs; audience identifi-
ing potential audiences, developing audiences, and funding. Workshops and
demonstrations are designed for students to gain practical experience working
with various programs and developing model programs. (Same as AMS 797, BIOL
784, HIST 721, and MUSE 705.) Prerequisite: Museum Studies student, Indigenous
Nations Studies student, or consent of instructor. LEC

GEOL 785 Principles and Practices of Museum Collection Management (3). Lecture,
discussion, and laboratory exercises on the nature of museum collections, their
associated data, and their use in scholarly research; cataloging, storage, fumi-
guration, and management of collections and related topics will be presented for
museums of art, history, natural history and anthropology. (Same as AMS 730,
BIOL 798, HIST 725, and MUSE 704.) Prerequisite: Museum Studies student, In-
digenous Nations Studies student, or consent of instructor. LEC

GEOL 791 Advanced Topics in Geology (1-5). Selected offerings in geology. In-
tended primarily for graduate students and qualified seniors. May include lectures,
discussions, readings, laboratory and field work. May be taken more than once. LEC

GEOL 891 Special Studies in Geology (1-5). May be repeated. RSHE

GEOL 899 Master’s Thesis (1-12). THE

GEOL 921 Advanced Invertebrate Paleontology (1-3). Detailed study of systematics, morphology, stratigraphic distribution and paleoecology of major
groups of organisms in the fossil record. Specific group or groups covered will
vary according to student need and student interests. May be repeated. Pre-
requisite: An introductory course in invertebrate paleontology. LEC

GEOL 932 Carbonate Petrology (3). Study of the physical and chemical factors im-
portant in the genesis and diagenesis of carbonate rocks. Includes the application
of principles learned from research on modern marine environments to the inter-
pretation of ancient carbonates. Various analytical techniques are covered with
emphasis on thin section petrography. Prerequisite: GEOL 331 and GEOL 712. LEC

GEOL 933 Sandstone Petrology (3). Description, classification, and interpretation
of sedimentary rocks, emphasizing petrographic methods applied to terrigenous
rocks and interpretation of provenance of sedimentary sequences. Prerequisite:
(Same as CE 753.) Prerequisite: GEOL 331 or GEOL 531 or MUSE 706. LEC

GEOL 991 Seminar in Geology (1-5). A review of the principles of the geological
sciences. Fields considered are: geomorphology, igneous petrology, metamorphic
petrology, invertebrate paleontology, groundwater, geochemistry, stratigraphy, sed-
glementation, micropaleontology, and geophysics. Several may be taken concurrently.
May be taken more than one semester. LEC

GEOL 999 Doctoral Dissertation (1-12). THE

Germanic Languages and Literatures

Chair: William Keel, german@ku.edu

Wescoe Hall, 1445 Jayhawk Blvd., Room 2080
Lawrence, KS 66045-7590

Graduate Director: Leonie Marx, 2076 Wescoe Hall, (785) 864-9177

Professors: Baron, Keel, Marx

Professors Emeriti: Dick, Huelbersgen, Maurer

Associate Professor: Holmes

Associate Professor Emeritus: Fullenwider

Assistant Professors: Brown, Crawford, Vyatkin

The department offers a full graduate program leading to the M.A. and Ph.D. degrees. In the Ph.D. program, a student may elect one of four specializations: German literature, Germanic philology, German applied linguistics, or Germanic linguistics.

Admission

In addition to general requirements, a student should have the equivalent of an undergraduate German major at KU.

Submit your application online at www.graduate.ku.edu/GAPC.

Send transcripts of all completed college and university course work to

The University of Kansas
Graduate Application Processing Center
Strong Hall, 1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

Send all other requested application materials to

The University of Kansas
Department of Germanic Languages and Literatures
Wescoe Hall, 1445 Jayhawk Blvd., Room 2080
Lawrence, KS 66045-7590

M.A. Degree Requirements

Nonthesis Degree

1. Thirty credit hours of graduate work in German. This re-

requirement may be reduced for students in high standing,
GERM 701, GERM 711, GERM 721, and at least one literature course from each of the following periods:

- Age of Goethe or Romanticism
- 19th century
- 20th century

or, in exceptional cases, equivalent seminars (GERM 960-GERM 966) must be included in the minimum. Equivalent courses may be substituted with the approval of the departmental graduate committee. The remaining 12 hours 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. GERM 701, GERM 711, GERM 721, and at least one literature course from two of the following literary periods:

   - Age of Goethe or Romanticism
   - 19th century
   - 20th century

or in exceptional cases, equivalent seminars (GERM 960-GERM 966) must be included in the minimum. Equivalent courses may be substituted with the approval of the departmental graduate committee. The remaining 9 hours may be taken from departmental course offerings in literature, philology, and linguistics at the graduate level.

2. A reading knowledge of Danish, Dutch, or French.
4. A written and oral examination.

*New teaching assistants normally must enroll in GERM 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 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, the candidate must have passed all parts of the Ph.D. preliminary examination.

Max Kade Center for German-American Studies

Director: Frank Baron, german@ku.edu, Sudler House, (785) 864-7343 or 7342

The center collects materials on German culture in the United States and fosters scholarship in German-Americana, especially dialect, literary, and interdisciplinary cultural studies, including dissertation research. The materials—10,000 books, as well as magazines, journals, and other writings—were produced or brought to this country by German-speaking immigrants and exiles from Nazi Germany. Among the holdings are 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 576 German Literature from 1890 to the Present** (3).
- **GERM 588 Deutsche Kulturkunde I** (3).
- **GERM 590 Deutsche Kulturkunde II** (3).
- **GERM 604 Introduction to the Germanic Languages** (3).
- **GERM 608 German Literature from the Beginning to 1750** (3).
- **GERM 614 Course in Representative Authors:** (3).
- **GERM 616 Topics in German Literature:** (3).
- **GERM 618 Topics in German Language and Linguistics:** (3).
- **GERM 620 Topics in German Culture and Folklore:** (3).
- **GERM 626 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

The Max Kade Center for German-American Studies collects materials on German culture in the United States and fosters scholarship in German-Americana.

KU has specialized German collections in Watson Library, Spencer Library, and Wescoe Hall.
GERM 712 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 713 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 Max Kade Distinguished Visiting Professor. Graduate students will be assigned additional work. LEC

GERM 721 Introduction to Middle High German Literature (3). The elements of Middle High German as required for reading medieval texts in the original. Intensive reading and literary analysis of at least one text in full. LEC

GERM 722 Early Modern Period (3). Reading and discussion of major literary works of the period; combined with lectures and background readings on literary, cultural, and political history. LEC

GERM 734 Age of Goethe (3). Reading and discussion of major literary works in the period; combined with lectures and background readings on literary, cultural, and political history. LEC

GERM 736 Post-Romantic 19th Century (3). Reading and discussion of major literary works in the period; combined with lectures and background readings on literary, cultural, and political history. LEC

GERM 738 Twentieth Century (3). Reading and discussion of major literary works in the period; combined with lectures and background readings on literary, cultural, and political history. LEC

GERM 751 Special Topics in Culture: _____ (3). Intensive study of a selected topic in German culture. May be repeated. LEC

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 Romanticism: _____ (3). LEC

GERM 764 Studies in the Literature of the 19th Century: _____ (3). LEC

GERM 766 Studies in Literature since 1890: _____ (3). LEC

GERM 800 Seminar: Teaching German as a Second Language (3). Introduction to selected aspects of second-language acquisition, foreign-language pedagogy, and contrastive grammar, with the major concentration on practical guidance in teaching select 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: GER 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: GER 721. LEC

GERM 824 Readings in Middle High German Lyrics (3). Reading and literary analysis of one of the following: Minnesänger Rheingold, Walther von der Vogelweide. Prerequisite: GER 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: GER 711. LEC

GERM 852 Special Topics in Literature: _____ (3). Prerequisite: GER 701. LEC

GERM 854 Studies in the Works of: _____ (3). In-depth study of the work of a major author in German literature. Prerequisite: GER 701. LEC

GERM 899 Master's Thesis (1-6). THE

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: GER 711. LEC

GERM 902 Old Saxon (3). Introduction to the elements of its grammar and discussion of its role in the Germanic family of languages. Selected readings from the Haedeland and discussion of the entire work. Prerequisite: GER 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: GER 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). THE

Scandinavian Courses

SCAN 570 Scandinavian Life and Civilization (3).

SCAN 660 Representative Authors in English (3).

SCAN 681 Topics in Scandinavian Languages and Linguistics: _____ (3).

SCAN 753 Investigation and Conference: _____ (1-3). Independent study and directed reading on special topics. Permission of the instructor is required. RSH

SCAN 906 Old Norse (3). Introduction to the grammar and reading of the prose literature of the “saga-age” (1100-1350). Varied selections from the literature provide the context in which the language is discussed. LEC

SCAN 907 Readings in Old Norse Literature (3). Intensive discussion of a single longer saga or several shorter works, or a combination of these on a single theme. Dialectal differences between W. Norse and older Germanic dialects will be noted. Prerequisite: SCAN 906. LEC

Gerontology

Director: David J. Ekerdt
Dole Human Development Center, 1000 Sunnyside Ave., Room 3090
Lawrence, KS 66045-7555, www2.ku.edu/~kugeron, (785) 864-4130
Graduate Adviser: Susan J. Kemper, skemper@ku.edu, (785) 864-4130

Core Faculty: Ekerdt, Grobe, Hummert, Johnson, Kemper, LaPierre
Affiliated Faculty: Atchley (Psychology), Burns (Neurology), Chapin (Social Welfare), Clair (Music and Dance), Crawford (Anthropology), Fawcett (Applied Behavioral Science), Fergusson (Speech-Language-Hearing), Fox (Health Policy and Management), Gallagher (Health, Sport, and Exercise Science), Hamilton (Psychology), Jackson (Hearing and Speech), Koenig (Social Welfare), Kunkel (Communication Studies), Little (Psychology), Luchies (Mechanical Engineering), D. Marquis (Philosophy), J. Marquis (Institute for Life Span Studies), McDowd (Occupational Therapy), McKenzie (Law), Michaelis (Pharmacology and Toxicology), Moore (Architecture), Nelson-Becker (Social Welfare), Nudo (Molecular and Integrative Physiology), Shireman (Preventive Medicine and Public Health), Vitevitch (Psychology), Williams (Nursing), Wilson (Mechanical Engineering), Zhang (Communication Studies), Zimmerman (Sociology)

Graduate study in gerontology at KU consists of two interdisciplinary programs, (1) Master of Arts and Doctor of Philosophy degrees in gerontology, and (2) a Graduate Certificate in gerontology. They are administered through the Gerontology Center, a component of the Schiefelbusch Institute for Life Span Studies.

M.A. and Ph.D. Program

The Doctor of Philosophy degree in gerontology was approved by the Kansas Board of Regents during the 1996-97 academic year. KU is one of only several universities nationwide offering the Ph.D. in gerontology. KU’s gerontology graduate program is unique in that it is an interdisciplinary research degree emphasizing social and behavioral gerontology. Faculty affiliated with the program include members of the College of Liberal Arts and Sciences and the Schools of Architecture and Urban Planning, Allied Health, Education, Engineering, Fine Arts, Law, Medicine, Nursing, Pharmacy, and Social Welfare. The graduate program in gerontology gives students a broad, advanced educational experience in gerontology. It provides a common focus for all students, yet allows each student to design a course of study appropriate for her or his career objectives. Courses give students a multidisciplinary perspective on the issues and problems of aging, built on a strong foundation in basic research on aging. The program prepares students for academic and research careers in gerontology, as well as for professional careers in private and public institutions and agencies providing services to older people.
individuals. Students seeking a terminal M.A. in gerontology are not admitted; the M.A. is offered only to those pursuing a Ph.D.

**Application and Admission.** Any student who has completed at least a B.A. or B.S. degree at an accredited institution of higher education may apply to the Ph.D. program. Required application materials include a résumé, a personal statement of professional and educational goals in gerontology, one copy of all undergraduate and graduate transcripts, list of all courses taken that are relevant to gerontology, three letters of recommendation, and scores from the Graduate Record Examination. Applicants whose first language is not English must submit proof of proficiency in English. GRE and other scores should be from the last two years. Further information is available from the graduate adviser or on the program’s Web site.

Submit your application online at [www.graduate.ku.edu/GAPC](http://www.graduate.ku.edu/GAPC), or download a paper application. Send transcripts of all completed college and university coursework to

The University of Kansas
Graduate Application Processing Center
Strong Hall, 1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

Send all other requested application materials to

The University of Kansas
Gerontology Program, Dole Human Development Center
1000 Sunnyside Ave., Room 3090
Lawrence, KS 66045-7555

**Program Requirements.** For the Ph.D., the student must complete all general requirements, 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:

- Gerontology proseminar
- Six hours of core courses in gerontology (selected from at least two of the following areas: biology of aging, psychology of aging, social gerontology)
- Twelve hours of supplemental courses in gerontology and related fields
- Six hours of basic statistics courses
- Three hours of methodology
- Six hours of thesis credit

For students who enter the program with master’s degrees or who complete the M.A. in gerontology, minimum requirements for the Ph.D. are as follows:

- Gerontology proseminar
- At least 6 hours of core courses in gerontology (selected from at least two of the following areas: biology of aging, psychology of aging, social gerontology)
- At least 12 hours of additional supplemental courses in gerontology and related fields
- Six hours of advanced statistics courses
- Six additional hours of methodology
- Completion of written and oral comprehensive examination

- Six hours of dissertation credit, completion of dissertation, and final oral examination

A list of courses meeting requirements in gerontology, statistics, and methodology is available from the graduate adviser.

**Evaluation of Satisfactory Performance.** The gerontology proseminar and core courses should be completed during the first two semesters. Students normally are expected to complete the M.A. degree in two years. The maximum time limit for completing all requirements for the M.A. degree is three years. Students normally are expected to complete the Ph.D. within three years of entering the program or of completing the M.A. The maximum time limit for completing all requirements for the doctoral degree is eight years after admission to the doctoral program with an acceptable master’s degree or after completion of the M.A. degree in gerontology. Students who complete the M.A. degree in gerontology at KU and subsequently begin doctoral studies have a total enrolled time of 10 years to complete both degrees.

**Written Preliminary Examination.** Upon completion of the M.A., a major portion of the course requirements, and the research skills requirement, each student must pass a written preliminary examination. This examination covers two content areas reflecting the student’s area of concentration and integrates theoretical and methodological issues in gerontology.

**Comprehensive Oral Examination.** The comprehensive oral examination covers gerontology. The examination can take one of five forms: (1) a defense of the written preliminary examination, (2) a defense of a completed research project, (3) a defense of a prospectus for a future research project, including the dissertation, (4) a discussion of a major review paper written by the student, (5) a review of a research grant proposal and a simulated site visit defense of the proposal.

**Dissertation Preparation and Final Oral Examination.** Upon passing the comprehensive oral examination, the student becomes a candidate for the doctorate. Graduate Studies designates a dissertation committee based on the recommendation of the program. The dissertation committee includes at least three members of the gerontology program faculty.

After passing the comprehensive oral examination, the candidate must be continuously enrolled until all degree requirements have been met. When the completed dissertation has been accepted by the committee, but before it has been bound, and all degree requirements have been met, the program requests the final oral examination to be scheduled, allowing a minimum of two weeks to verify the requirements and publicize the examination. At least five months must elapse between successful completion of the comprehensive oral examination and the final oral examination.

**Foreign Language or Other Research Skills Requirement.** Doctoral students must demonstrate competence in a research skill “distinct from 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 Certificate Program

The graduate certificate in gerontology allows students to combine a research interest in aging with graduate study in an academic department. Completion of the certificate enables students to apply their specialized knowledge of the social, psychological, demographic, and biomedical aspects of aging to their professional disciplines. The certificate represents an additional credential for graduate students from a variety of academic 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 Certificate Program in Gerontology. Nondegree-seeking students also may apply. Apply to the gerontology faculty adviser. A faculty adviser knowledgeable in aging is designated to oversee the student’s progress.

Requirements. A detailed description is available on the Gerontology Center’s Web site. Students complete 15 hours of course work including a research practicum or field placement. The certificate enables students to integrate knowledge of gerontology into their 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

Cooperating departments and schools list courses related to aging. See the Web site for course listings from recent semesters.

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: William Tsutsui
Wescoe Hall, 1445 Jayhawk Blvd., Room 3650
Lawrence, KS 66045-7590, www.history.ku.edu, (785) 864-3569
Director of Graduate Studies, Eve Levin, 2016 Wescoe Hall, (785) 864-9463
Professors: Bailey, J. Clark, Epstein, Kuznesof, Levin, Saul, Tsutsui, Wilson, Worster
Associate Professors: Brooks, Corteguera, DeKosky, Earle, Kelton, Lewin, Moran, Napier, Rath, Rosenthal, Sax, Sivan, Sponholtz
Assistant Professors: K. Clark, Cushman, Forman, Greene, Jahanbani, Jenkins, MacGonagle, Nelson, Tuttle, Vicente, Warren, Weber, Wood

Fields of Study

The department has the following established fields, each with subdivisions:
- Ancient/Medieval History
- Modern European History
- Great Britain and the Empire
- Russian and East European History
- East Asian History
- Latin American History
- U.S. History
- Native American History
- History of Science and Medicine
- Environmental History
- Military/Diplomatic History
- History of Women and Gender

Students may be permitted to pursue programs in additional fields appropriate to the expertise of the faculty, with the approval of the department’s graduate board.

Application Deadline

The application deadline for admission and financial aid is December 1, to begin the program the following fall semester.

Admission

The department accepts applications for both the M.A. and the Ph.D. Students who currently have only the B.A. but plan to study for the Ph.D. should apply for admission to the M.A. program. Applicants are not required to have a B.A. in history to be eligible for admission. Because scholarly work in many fields of historical study depends on competence in one or more foreign languages, the department encourages applicants to have a reading competence in at least one foreign language before enrolling.

For complete information on required materials, visit the department Web site, www.history.ku.edu, and select Graduate Program, or contact the department. The department requires a completed application checklist, statement of purpose, résumé or curriculum vitae, and writing sample. All graduate applicants must take the Graduate Record Examination general test and have a copy of the results forwarded to the department.

Submit your application online at www.grad.ku.edu/GAPC. Send transcripts of all completed college and university course work to

The University of Kansas
Graduate Application Processing Center
Strong Hall, 1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7590

Send all other requested application materials to

The University of Kansas
Department of History
Wescoe Hall, 1445 Jayhawk Blvd., Room 3650
Lawrence, KS 66045-7590

Department degree requirements are being revised. Consult the department for current information.

M.A. Degree Requirements

The master’s program in history requires satisfactory completion of 30 credit hours of graduate courses including at least 6 hours in history research seminars and the passing of a comprehensive oral examination.

Soon after admission, the student should select a faculty member as his or her adviser. The adviser directs the student’s work and advises the student about selecting Option A or Option B.

Option A. Three fields of history. The fields are the equivalent of secondary fields drawn from three different major fields. With the consent of departmental advisers, when a student’s program warrants a substitution, she or he may substitute an allied field outside the department that provides vital support for the program (e.g., substituting international relations for U.S. diplomatic history). At least 9 hours of course work must be taken in each of the three fields. Students must take HIST 805.

Option B. A major field and one secondary field. At least two history faculty members must serve on the student’s M.A. committee for the major field. At least 18 hours of course work in the major field and 9 hours in the secondary field must be taken. Students must take HIST 805.

Nine hours of work in courses numbered 801 or higher and 6 hours of research seminar are required. Normally, at least 3 hours of seminar under each program should be taken with the student’s program adviser, who chairs the oral examining committee.

All master’s candidates must produce two professional-quality, article-length papers (approximately 30 pages) in the two required seminars. The final oral examination for the mas-
ter’s degree includes questions concerning the papers as well as coverage of the student’s major and secondary fields.

**Ph.D. Degree Requirements**

Students normally must complete the M.A. degree before they are eligible to enter the Ph.D. program. Students who enter the M.A. program may either complete the degree or petition for direct admission to the Ph.D. program. This petition first must be endorsed by the student’s adviser and the field committee and then be approved by the department’s graduate board.

In addition to general requirements, the following departmental requirements must be met. A minimum of 11 courses (33 credit hours) is required for the Ph.D. Students may choose between two options for their course work.

**Track A.** Students offer a major and two secondary fields. The major field includes six courses (18 credit hours). The secondary fields include two courses (6 credit hours), for a total of 12 credit hours; one of the secondary fields may be taken in a discipline outside the department, but a student may offer all three fields in history. Students must take HIST 805.

**Track B.** Students select two 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 must choose a 4/4 or a 5/3 configuration for their eight courses. Students must take HIST 805.

For both Track A and Track B, the major and secondary fields are those listed in this catalog or approved by the graduate board.

The department requires proficiency, at the level the student’s committee deems necessary, in one or two foreign languages appropriate to the student’s fields of specialization. Students should present satisfactory evidence of proficiency in the first language before enrollment in the second semester of degree work. Appropriate proficiency in the second language (if necessary) must be achieved before the student may take the oral comprehensive examination.

Before taking the oral comprehensive examination, students must complete (in addition to the language requirement) a minimum of five colloquia and seminars, including two in the major field(s) and one in each secondary field. At least two of the five must be research seminars in which the student produces professional-quality, article-length papers (approximately 30 pages).

In lieu of written examinations, students compile portfolios of their professional work demonstrating command of their fields and their preparation to undertake dissertation research. Following presentation of the portfolio, students take an oral examination covering their fields of study and their dissertation proposals.

### History Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>HIST 500</td>
<td>History of the Book</td>
<td>(3)</td>
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<tr>
<td>HIST 502</td>
<td>Development of Ancient Greece, ca. 1000-300 B.C.</td>
<td>(3)</td>
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<tr>
<td>HIST 506</td>
<td>Roman Republic</td>
<td>(3)</td>
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<tr>
<td>HIST 507</td>
<td>Early Roman Empire</td>
<td>(3)</td>
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<tr>
<td>HIST 508</td>
<td>Late Roman Empire (284-527)</td>
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<td>HIST 509</td>
<td>Multinational Corporations: The Role of Money and Power</td>
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<tr>
<td>HIST 510</td>
<td>Topics in: _____</td>
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<tr>
<td>HIST 513</td>
<td>Early Medieval Culture</td>
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<tr>
<td>HIST 515</td>
<td>The Crusades in Cross-cultural Perspective</td>
<td>(3)</td>
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<tr>
<td>HIST 516</td>
<td>Later Medieval Culture</td>
<td>(3)</td>
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<tr>
<td>HIST 519</td>
<td>European Intellectual History of the 17th Century</td>
<td>(3)</td>
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<tr>
<td>HIST 520</td>
<td>The Age of the Renaissance</td>
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<td>HIST 521</td>
<td>The Age of the Reformation</td>
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<td>HIST 522</td>
<td>The Age of Religious Wars, 1540-1648</td>
<td>(3)</td>
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<tr>
<td>HIST 523</td>
<td>Europe between Absolutism and Revolution</td>
<td>(3)</td>
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<tr>
<td>HIST 524</td>
<td>The French Revolution</td>
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<td>HIST 525</td>
<td>Modern France: From Napoleon to de Gaulle</td>
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<td>HIST 526</td>
<td>Nineteenth-century Europe, 1789-1914</td>
<td>(3)</td>
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<td>HIST 527</td>
<td>Recent European History, 1870 to the Present</td>
<td>(3)</td>
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<td>HIST 528</td>
<td>Economic History of Europe</td>
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<tr>
<td>HIST 529</td>
<td>Intellectual History of 19th-century Europe</td>
<td>(3)</td>
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<tr>
<td>HIST 530</td>
<td>History of American Women—Colonial Times to 1870</td>
<td>(3)</td>
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<tr>
<td>HIST 531</td>
<td>History of American Women—1870 to Present</td>
<td>(3)</td>
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<td>HIST 532</td>
<td>History of Women and Work in Comparative Perspective</td>
<td>(3)</td>
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<tr>
<td>HIST 533</td>
<td>The History of Women and the Family in Europe, from 1500 to the Present</td>
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<td>HIST 536</td>
<td>Modern German History—1848 to the Present</td>
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<td>HIST 537</td>
<td>France from the Renaissance to the French Revolution</td>
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<td>HIST 538</td>
<td>European Intellectual History of the 18th Century</td>
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<td>HIST 539</td>
<td>Britain and Ireland from 1200 to 1500</td>
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<td>HIST 541</td>
<td>British History, 1500-1660</td>
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<td>HIST 544</td>
<td>Britain and Ireland from 1200 to 1500</td>
<td>(3)</td>
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<td>HIST 545</td>
<td>British History, 1660-1832</td>
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<td>HIST 546</td>
<td>History of Cartography</td>
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<td>HIST 547</td>
<td>The Intellectual History of Europe in the 20th Century</td>
<td>(3)</td>
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<tr>
<td>HIST 548</td>
<td>British History, 1832 to the Present</td>
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<td>HIST 550</td>
<td>The British Empire</td>
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<td>HIST 551</td>
<td>Spain and its Empire, 1450-1700</td>
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<td>HIST 555</td>
<td>Aspects of British Political Thought</td>
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<td>HIST 556</td>
<td>Aspects of British Political Thought, Honors</td>
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<td>HIST 557</td>
<td>Nationalism and Communism in East Central Europe from 1772 to the Present</td>
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<td>HIST 558</td>
<td>Religion in Britain Since the Reformation: A Survey</td>
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<tr>
<td>HIST 559</td>
<td>Religion in Britain Since the Reformation: A Survey, Honors</td>
<td>(3)</td>
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<tr>
<td>HIST 562</td>
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<tr>
<td>HIST 563</td>
<td>U.S. Environmental Thought in the 20th Century</td>
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<td>HIST 564</td>
<td>Medieval Russia</td>
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<td>HIST 565</td>
<td>Imperial Russia and the Soviet Union</td>
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<td>HIST 566</td>
<td>Russia in the 18th Century, 1700-1800</td>
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<td>HIST 567</td>
<td>Oil, The Great Powers, and the Persian Gulf, 1900 to the Present</td>
<td>(3)</td>
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<td>HIST 568</td>
<td>Russia in the 20th Century</td>
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<td>HIST 569</td>
<td>The Middle East in the 19th and 20th Centuries</td>
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<td>HIST 570</td>
<td>The Middle East Since World War II</td>
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<td>HIST 571</td>
<td>The Spanish Borderlands in North America</td>
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<td>HIST 572</td>
<td>The United States Borderlands: People, Place, Past</td>
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<td>HIST 573</td>
<td>Latin America in the 19th Century</td>
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<td>HIST 574</td>
<td>Slavery in the New World</td>
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<td>HIST 575</td>
<td>History of Mexico</td>
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<td>HIST 576</td>
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<td>HIST 578</td>
<td>Social History of South America</td>
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<td>HIST 579</td>
<td>The History of Brazil</td>
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<td>HIST 580</td>
<td>Economic History of Latin America</td>
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<td>HIST 581</td>
<td>Topics in Third World History: _____</td>
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<td>HIST 583</td>
<td>Imperial China</td>
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<td>HIST 585</td>
<td>Reform in Contemporary China</td>
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<td>HIST 586</td>
<td>Ancient and Medieval Japan</td>
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<td>HIST 587</td>
<td>Early Modern Japan</td>
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<td>HIST 588</td>
<td>Japan, 1853-1945</td>
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<td>HIST 589</td>
<td>Japan Since 1945</td>
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<td>HIST 590</td>
<td>Cultural History of Korea</td>
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<tr>
<td>HIST 591</td>
<td>Food in History: West and East</td>
<td>(3)</td>
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KU’s doctoral program in history is tied for 24th in the nation, according to U.S. News & World Report’s “America’s Best Graduate Schools” rankings for 2007.

History degree requirements are being revised. Consult the department for current information.
Spencer Research Library houses the P.S. O’Hegarty Library, a collection of works on Irish history and the Irish literary renaissance.

Overall, KU has 43 nationally ranked programs — 24 in the top 25 and 12 in the top 10 among public universities — according to U.S. News & World Report’s “America’s Best Graduate Schools” rankings for 2007.
emphasized. Topics covered will address relevant benchmarks in the state curricular standards, the political landscape in the United States, the economic picture, the population, the environment, and the national standards in world history. (Same as EALC 747.) Prerequisite: Approval of the instructor. LEC

HIST 799 Museum Studies Apprenticeship (1-6). Provides directed, practical experience in the professional aspects of museum work, including management of historical materials. (Same as AMS 799, ANTH 799, BIOL 799, GEOL 723, and MUSE 799.) Prerequisite: Consent of instructor. FLD

HIST 800 Readings in: (1-8). Prerequisite: Consent of instructor. RSH

HIST 801 Colloquium in: (1-6). Reading and discussion of selected topics. LEC

HIST 802 Seminar in: (1-3). Research Seminar on selected topics. SEM

HIST 805 Seminar in Historical Practice (3). Analyze the relationship between historical facts and the history of historical writing. Examples of works in the field and works involving new approaches and perspectives. A long historiographical paper will be required. LEC

HIST 830 Colloquium in 18th- and 19th-century Britain (3). This course covers the varied elite and popular responses to the creation of a capitalist economy (agrarian, industrial) in Britain from the mid-1700s to 1870. The aim is to trace the relationship between political movements and socio-cultural attitudes and institutions. LEC

HIST 831 Colloquium in 20th-century Britain (3). This course examines the main developments in the political, social, and cultural history of Britain since 1890. The aim is to trace the relationship between political movements and socio-cultural attitudes and institutions. LEC

HIST 833 Colloquium in British History, 1500-1660 (3). This course will engage with recent scholarship on the Renaissance and Reformation, the Civil War and the English Republic. LEC

HIST 834 Colloquium in the History of the British Empire (3). The course will deal selectively with themes in the political and cultural interaction of the peoples of the British Isles with peoples overseas, the expansion and contraction of empire, and the rationales for these processes. LEC

HIST 836 Colloquium in British Political Thought (3). This course provides an introduction to the rich tradition of British writings on politics through a close reading of a number of classic texts, interpreted in their historical settings. LEC

HIST 837 Colloquium in British Religious History (3). This course will deal analytically and synoptically with religion in Britain from the reformation to the present with special reference to the Church of England, and will focus on the themes of ecumenism, the dissolution of monasteries, and the ecclesiastical reforms in the interregnum period, their different experiences in the period of 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 Russian History (3). A group readings course that begins with Russia in the medieval period and continues through the end of the 20th century. Topics may vary each term, but may include such subjects as political, social, religious, or intellectual history. The course will focus around significant works in the field and works involving new approaches and perspectives. A long historiographical paper will be required. LEC

HIST 853 Research Seminar: The Atlantic World in the Early Modern Period (3). This course will examine the history of Europe between the Renaissance and the French Revolution. Emphasis will be placed upon certain problems within this period and the recent historiography that deals with them. The second in a sequence of colloquia in Modern European History. Required for European history graduate students and students majoring in other fields whose secondary fields correspond to this time frame. LEC

HIST 854 Colloquium in Early Modern Europe, 1914–Present (3). The focus will be on reading and discussion of historical literature on the end of Imperial Russia, the Russian revolution and the Soviet Union in the 20th century. Topics may vary each term, but may include such subjects as political, social, religious, or intellectual history. The course will focus around significant works in the field and works involving new approaches and perspectives. A long historiographical paper will be required. LEC

HIST 855 Colloquium in Modern European History I—Renaissance to the French Revolution (3). This course will concentrate upon a number of selected topics in the history of Europe between the Renaissance and the French Revolution. Emphasis will be placed upon certain problems within this period and the recent historiography that deals with them. The first in a sequence of colloquia in Modern European History. Required for European history graduate students and students majoring in other fields whose secondary fields correspond to this time frame. LEC

HIST 856 Colloquium in Modern European History II—Major Themes in Modern History (3). This course will concentrate upon a number of selected topics in modern European history. Emphasis will be placed upon certain problems within this period and the recent historiography that deals with them. The second in a sequence of colloquia in Modern European History. Required for European history graduate students and students majoring in other fields whose secondary fields correspond to this time frame. LEC

HIST 857 Colloquium in Modern European History III—French Revolution to the Present (3). From the French Revolution into the contemporary era. The third in a sequence of colloquia in Modern European History. Required for European history graduate students and students majoring in other fields whose secondary fields correspond to this time frame. LEC

HIST 858 Colloquium in Modern European History IV—Major Themes in Modern History (3). This course will concentrate upon a number of selected topics in modern European history. Emphasis will be placed upon certain problems within this period and the recent historiography that deals with them. The fourth in a sequence of colloquia in Modern European History. Required for European history graduate students and students majoring in other fields whose secondary fields correspond to this time frame. LEC

HIST 879 Colloquium on North American Environmental History (3). Intensive survey of significant works in the field from colonial times to the present, with attention to bibliography, research methods and needs, and leading issues in interpretation. LEC
HIST 890 Colloquium in American History, 1492-1800 (3). Study of the leading interpretations of major issues in the history of Colonial and Revolutionary America, including appropriate attention to new approaches and techniques in research. The first course in the sequence of colloquia in United States history. Prerequisite: Consent of 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. (Same as AMS 835 and WS 835.) LEC

HIST 896 Colloquium in United States Women's History (3). This colloquium will cover theoretical and topical readings on the history of women in the United States from the pre-contact period to the present. It is designed to familiarize students with the most important and current historiography in the field. (Same as AMS 836 and WS 836.) 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. (Same as AMS 837 and WS 837.) LEC

HIST 898 Colloquium in Material Culture and History (3). This course provides an overview of several methods of the Standing Field Committee in Modern Environmental History, including field methods and methods in environmental history, viewed from both an American and modern world perspective. LEC

HIST 900 Independent Research Seminar: _____ (3). Design and completion of an independent project, culminating in the production of a professional-quality paper based on original, primary source research. Prerequisite: Consent of the instructor. LEC

HIST 901 Research Seminar in Global History (3). A research seminar oriented around cross-regional, comparative, and transnational aspects of history, culminating in the production of a professional-quality paper based on original, primary source research. SEM

HIST 910 Seminar in Roman History: _____ (3). A seminar in specialized aspects of Roman history. May be repeated for credit. LEC

HIST 913 Numismatics as a Basis for Study of Roman Noble Families of the Late Republic (3). A seminar involving the study of the importance and influence of the noble families of Rome on Roman history (200-27 B.C.) with special emphasis on the literary and numismatic evidence. Reading knowledge of Latin will be essential for this course. LEC

HIST 914 The Major Roman Historians (3). An analysis and criticism of the works of the 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 B.C.-378 A.D.). LEC

HIST 918 Elements of Latin Paleography (3). Introduction to the techniques of reading, dating, and localizing medieval Latin manuscripts. LEC

HIST 919 Seminar in Medieval Europe (2-6). LEC

HIST 920 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 seminar focusing on new, actively-investigated and controversial themes in British history, chiefly c. 1660-1832. LEC

HIST 932 Order and Disorder in Britain and America, c. 1750-1920 (3). The study of the history of crime and protest in their relationship with the wider social and political theory of Britain and America. Specific topics may include the impact of industrialization, the notion of the ‘moral economy,’ the legal and ideological nature of the death penalty, the crowd in history, and the administrative and intellectual developments in policing, prisons, and asylums. LEC

HIST 934 Seminar in Modern European History (1-12). A research and thesis seminar offered by several members of the Standing Field Committee in Modern European History. May be repeated. LEC

HIST 940 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 around topics such as Peter the Great to the present. LEC

HIST 950 Seminar in Latin American History (3). A research seminar focused on a major theme or problem in Latin American history. LEC

HIST 951 Seminar in Latin American Revolutions (3). This seminar focuses on sweeping socio-political upheavals such as occurred in Mexico in 1910, Guatemala in 1944, Bolivia in 1952, Cuba in 1959, and Nicaragua in 1979. After considering various sociological and political theories of revolution the seminar searches for an understanding of the basic reasons for revolutions in the countries mentioned (and failure of revolutionary efforts elsewhere) and possible common characteristics of the Latin American revolutionary 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 major themes. 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 Britain and America. May be repeated. LEC

HIST 965 The American Revolutionary Experience (1-12). An intensive, research-oriented study of American history from 1775 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 seminar will focus on the history of women in the United States from the pre-contact period to the present. Students will research and write a paper using primary sources, and present those papers to the seminar for evaluation. (Same as AMS 973 and WS 873.) LEC

HIST 974 Seminar in American History: _____ (3). A research seminar 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. THE

History of Art

Chair: Linda Stone-Ferrier, arthist@ku.edu
Spencer Museum of Art, 1301 Mississippi St., Room 209 Lawrence, KS 66045-7501
(785) 864-4713, fax: (785) 864-5091
Graduate Advisers:
European and American Art History: John Pultz, 200A Spencer Museum of Art, (785) 864-4713
Asian Art History (Doctoral): Marsha Hauser, 200C Spencer Museum of Art, (785) 864-4713

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.

Clendening History of Medicine Library on the Medical Center campus in Kansas City has one of the finest collections of rare medical books in the world.
Asian Art History (Master’s): Amy McNair,
210 Spencer Museum of Art, (785) 864-4713
Professors: Eldredge, Goddard, Haufler, Stone-Ferrier
Associate Professors: Cateforis, Fowler, Kessler, McNair, Pultz
Assistant Professors: Cornelison, Evalds, Kaneko, Salami
KU offers graduate art history courses covering Africa, East Asia, Europe, and the United States. Master of Arts degrees are offered in European and American art, East Asian art, and African art; they offer students a broad knowledge of the visual arts in those fields, as well as an introduction to the basic concepts and methods of the discipline. The M.A. may be pursued as a terminal degree or as preparation for specialized doctoral studies. Ph.D. degrees are offered in European and American art, East Asian art, and African art; they offer the opportunity for advanced research and concentration. Graduates typically seek careers in college and university teaching and in museum work.

Admission
Applicants for the M.A. degree are expected to hold the B.A. or equivalent degree with an overall grade-point average of 3.3 or better and to have taken at least six college courses in art history or the equivalent, distributed to provide the basic foundation for advanced study. M.A. applicants should specify their area of proposed study (African, East Asian, or European and American art). Applicants for the Ph.D. are expected to hold an appropriate M.A. degree.

Completed applications must be submitted by January 1 for fall admission and October 15 for spring admission. The Graduate Record Examination general test is required. Submit your application online at www.graduat.ku.edu/GAPC. Send transcripts of all completed college and university course work to

The University of Kansas
Graduate Application Processing Center
Strong Hall, 1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

Send all other requested application materials to

The University of Kansas
Graduate Admissions, Department of Art History
Spencer Museum of Art
1301 Mississippi St., Room 209
Lawrence, KS 66045-7500

Handbook for Graduate Students
A detailed presentation of departmental regulations is included in the department’s Graduate Student Handbook, available in the departmental office and online at www2.ku.edu/~kuarthis.

M.A. Degree Requirements
The student must complete 30 hours of graduate credit, at least 21 of which must be in art history distributed according to department requirements. All course work must satisfy grade standards. The candidate must demonstrate proficiency in the reading of a foreign language, normally a major European language, Chinese, or Japanese. A general written examination (in European and American art, East Asian art, or African art) must be passed for the M.A. degree. After passing the M.A. examination, students wishing admission to the doctoral art history program at KU must submit a petition for continuation of graduate studies and receive departmental approval for the petition.

Ph.D. Degree Requirements
Within three semesters of admission to the Ph.D. program, each student, in consultation with a major adviser, prepares for review by the full graduate faculty a petition that proposes a program of study, including a primary field of specialization and two minor fields, one of which may be outside the department. The petition, as approved by the faculty, becomes the student’s program of study, which is then overseen by the major adviser and guided by a committee that includes the major- and minor-field advisers.

Ph.D. aspirants must satisfy all general requirements. Ph.D. aspirants must demonstrate proficiency in two research skills (normally foreign languages) relevant to their research; this requirement must be met before aspirants are admitted to the comprehensive examinations for the doctorate. (One of the two research skills is normally the foreign language that met the M.A. language requirement.)

Students must take both written and comprehensive oral examinations at the end of their course work. Both written and oral examinations cover the major area and two minor areas specified in the student’s Ph.D. petition. The oral examination normally follows the written examination by two weeks.

Upon passing the comprehensive oral examination, the aspirant becomes a candidate for the Ph.D. and submits a dissertation proposal for faculty approval. Upon acceptance of the dissertation in final draft form, the candidate must successfully pass the final oral examination (the dissertation defense) to complete the degree.

History of Art Courses

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<tr>
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<td>Renaissance Art in Italy: The 15th Century (3).</td>
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<td>HA 600</td>
<td>Biography of a City: _____ (3).</td>
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<td>HA 604</td>
<td>Special Study in Asian Art: _____ (3).</td>
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<tr>
<td>HA 615</td>
<td>Special Studies in Modern Art: _____ (3).</td>
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<tr>
<td>HA 650</td>
<td>Classical Chinese Art Texts (3).</td>
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</table>
HA 675 Special Studies in American Art: (3).
HA 676 West African Art (3).
HA 677 African Design (3).
HA 679 African Expressive Culture: (3).
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 of art and knowledge of a foreign language. LEC

HA 705 Major Artists: (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: (1-6). Seminar dealing with particular art historical problems of a special and specific nature. Different art topics are offered in different semesters. May be repeated for credit up to a maximum of 12 credit hours. 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 730 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 curators and public activity are among the areas studied. LEC

HA 732 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 735 Seminar in African Art (3). A concentrated study of a special topic relating to African art and culture. Topics are offered in different semesters. Same as AAAS 715. Prerequisite: Nine hours of Art History and/or consent of instructor. LEC

HA 736 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 739 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 Vangenst. Prerequisite: A study of 19th-century history of art. LEC

HA 746 Calligraphy of China and Japan (3). The history of Eastern 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 20th century. Topics will include Buddhist and other religious paintings, narrative scroll paintings, 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 many schools and styles of painting that were brought to a height during this era. Ink painting, Zen painting, decorative painting, landscape painting, and the paintings of Van Dyck on the other. Prerequisite: A survey of Northern Baroque art or consent of instructor. LEC

HA 784 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 art and connoisseurship. Prerequisite: A survey of Chinese art. LEC

Graduate students in art history have received such major fellowships as Fulbrights and Kress Foundation grants.

The Murphy Travel Fund provides support for national and international research trips for art history graduate students and faculty members.

KU's Spencer Museum of Art is open from 10 a.m. to 5 p.m. Tuesday, Wednesday, Friday, and Saturday; from 10 a.m. to 9 p.m. Thursday; and from noon to 5 p.m. Sunday. Closed Monday.
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 945 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 950 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 955 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 960 Seminar in 21st-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 975 Seminar in African 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 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 one or two 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). THE

**Humanities and Western Civilization**

No graduate program in humanities and western civilization is offered. The following courses may be taken for graduate credit.

### Humanities and Western Civilization Courses

**HWC 500 Studies in:** (3).

HWC 510 Science, Technology, and Society (2-3).

HWC 514 Totalitarianism and Literature in Central Europe (3).

HWC 520 Literature in Translation: (3).

HWC 524 Chinese Thought (3).

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 560 Biography of a City: (3).

HWC 620 Study of a Culture: (3).

HWC 650 Senior Seminar in Peace and Conflict Studies (3).

HWC 760 Investigation and Conference in Peace and Conflict Studies (3). Research under the supervision of a faculty member and approved for the Peace and Conflict Studies program. Individual conferences and open only to graduate students. Prerequisite: At least six hours of course work toward the Graduate Certificate including HWC 801. SEM

**Indigenous Nations Studies**

**Acting Director:** Danny J. Anderson

Lippincott Hall, 1410 Jayhawk Blvd., Room 104

Lawrence, KS 66045-7515

www.indigenous.ku.edu, (785) 864-2660, fax: (785) 864-0370

Professor: Mihesuah

Associate Professors: O’Brien, Pierotti, Yellow Bird

Assistant Professor: Fitzgerald

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 the Tribal Law and Government Center in the KU School of Law and Haskell Indian Nations University.

### Admission

Regular admission ordinarily is granted to applicants who hold the baccalaureate degree or the equivalent (for international students) and whose undergraduate grade-point averages are B or above (3.0 on a 4.0 scale). Applicants who do not meet these criteria but whose records and recommendations suggest likely success may be admitted on probationary or provisional status.

The INS program has several application deadlines. January 15 is the deadline to be considered for admission and nomination for a university scholarship. March 15 is the deadline for admission and consideration for internal INS scholarships. May 15 is the final deadline for admission.

Applications will not be considered until all the following materials have been submitted:

- Domestic or international online graduate application
- Application fee (nonrefundable check payable to the University of Kansas, see Admissions in the General Information chapter of this catalog)
- Graduate Record Examination scores (International students must submit Test of English as a Foreign Language scores.)
- One official transcript from each previously completed college or university
- One two- to three-page personal statement
- Résumé
- Three letters of recommendation
- Writing sample (research paper, etc.)

Submit your application online at www.graduate.ku.edu/GAPC. Send transcripts of all completed college and university course work to:

The University of Kansas
Graduate Application Processing Center
Strong Hall, 1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

Send all other requested application materials to:

The University of Kansas
Indigenous Nations Studies
Lippincott Hall, 1410 Jayhawk Blvd., Room 104
Lawrence, KS 66045-7515
M.A. Degree Requirements and Concentrations

Students pursuing the M.A. in Indigenous Nations Studies must complete a minimum of 31 to 34 graduate credit hours, depending on the concentration: Tribal Policy and Governance (31 credit hours minimum) or Preservation and Management of Indigenous Resources, which includes separate concentrations or specializations in Cultural Preservation Management (34 credit hours minimum), Environmental Science and Resources Management (31 credit hours minimum), or Language Documentation and Revitalization (34 credit hours minimum).

Core Curriculum. All INS students must take the following required core courses (9 credit hours):
- INS 800 Research Methods and Indigenous Peoples ........................................ 3
- INS 801 Indigenous Peoples of the World ....................................................... 3
- INS 802 Indigenous Decolonization and Empowerment .................................. 3

Core courses provide basic awareness of the Indigenous peoples of the world and decolonization methodologies upon which students build specialized knowledge in one of the concentrations.

Thesis/Nonthesis Options. Students must complete a master’s thesis or a nonthesis project. The master’s thesis is recommended for students planning to pursue a Ph.D. Both the thesis and the nonthesis project consist of original research that the student completed under the direction of a three-member committee. Students must defend their research in an oral examination and relate the importance of their work to the discipline.

Tribal Policy and Governance (31 credit hours minimum). This concentration prepares students for the practical challenges associated with exercising Indigenous self-determination and inherent sovereignty. To the Indigenous nations, survival depends on the revitalization of all aspects of Indigenous life, such as culture, economics, government, and legal affairs. The curriculum provides the foundation necessary to implement sovereignty development initiatives by using a dual focus: (1) study of the law, politics, and economics affecting Indigenous nations and surrounding states and (2) study of broader societal phenomena.

Required Concentration Courses. A minimum of seven courses is required in addition to the core curriculum.
- INS 804 Special Topics: Tribal-Federal Relationship: Law and Policy ............... 3
- INS 824/LAW 914 Federal Indian Law ............................................................ 3
- INS 899 Master’s Thesis or nonthesis project (1 hour minimum) .................... 1

Choose 15 credit hours from the following electives: ....................................... 15
- INS 803 Issues Facing Indigenous Peoples (3)
- INS 804 Special Topics: Decolonizing Narratives: Indigenous Literature and Culture in the Age of Sovereignty (3)
- INS 804/LAW 900 Special Topics: Economic Development and Indigenous Nations (2)
- INS 804 Special Topics: Indian Gaming (3)
- INS 804 Special Topics: Indigenous Oral Traditions (3)
- INS 804 Special Topics: Global Health, American Indians, and Complementary Medicine (3)
- INS 807 Internship in Indigenous Nations Studies (2-6)
- INS 810 Indigenous Women and Activism (3)
- INS 811 Applied Indigenous Leadership (3)
- INS 812 Native American Oppression, Resistance, and Liberation (3)
- INS 865 Grant Writing and Fund Raising (3)
- INS 866 Indigenous Museum Management (3)
- INS 876/LAW 879 Comparative Law (3)
- INS 882/LAW 967 Native American Natural Resources (3)
- INS 883/LAW 987 Sovereignty, Self-determination, and Indigenous Nations (2-3)
- HIST 618 History of the American West to 1900 (3)
- HIST 800 Readings in: Native American History (3)
- LAW 985 Tribal Judicial Support Clinic (3)
- POLS 684 International Political Economy (3)

Preservation and Management of Indigenous Resources: Cultural Preservation Management (34 credit hours minimum).

This concentration 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 and decolonization, the need to provide for care of cultural patrimony arises.

For this concentration, each degree candidate must serve a supervised internship 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.

Required Concentration Courses (16 credit hours minimum required in addition to the core curriculum)
- INS 866 Indigenous Museum Management .................................................. 3
- INS 867 Indigenous Records Management ..................................................... 3
- INS 869 Traditional Care of Collections .......................................................... 3
- INS 870 Internship in Indigenous Nations Studies .......................................... 6
- INS 899 Master’s Thesis or nonthesis project (1 hour minimum) ................. 1

With advising, 9 credit hours of electives must be taken. Some other courses may be used to satisfy these electives with permission of the graduate director and/or advisers. Choose 9 hours from the following electives: .............................. 9
- INS 804 Special Topics: Decolonizing Narratives: Indigenous Literature and Culture in the Age of Sovereignty (3)
- INS 804 Special Topics: Indigenous Oral Traditions (3)
- INS 863 Indigenous Archives (3)
- INS 866 Exhibiting Culture (3)
- INS 866 Indigenous Museum Management .................................................. 3
- INS 868 Indigenous Records Management ..................................................... 3
- BUS 701 Topics in: Native and Western Views of Nature (3)
- MUSE 702 Nature of Museums (3)
- MUSE 704 Principles and Practices of Museum Collection Management (3)
- MUSE 705 Introduction to Museums and Public Education (3)
- MUSE 706 Conservation Principles and Practices (3)

Preservation and Management of Indigenous Resources: Environmental Science and Resources Management (31 credit hours minimum). Indigenous autonomy over lands and natural resources is a major component of tribal sovereignty. This concentration examines traditional approaches and perspectives as they relate to the management of Indigenous ecosystems. The curriculum gives students the knowledge and skills to analyze, understand, and provide solutions to modern environmental issues including ecological distress, conservation, and resource management.

Required Concentration Courses (10 credit hours minimum required in addition to the core curriculum)
- INS 873 Environmental Justice ........................................................................ 3
- INS 874 Natural Resource Management: Indigenous Perspective .................. 3
- INS 882/LAW 967 Native American Natural Resources .................................. 3
- INS 899 Master’s Thesis or nonthesis project (1 hour minimum) ................. 1

With advising, 12 credit hours of electives must be taken. Some other courses may be used to satisfy these electives with permission of the graduate director and/or advisers. Choose 12 hours from the following electives: ................. 12
- INS 803 Issues Facing Indigenous Peoples (3)
- INS 804 Special Topics: Decolonizing Narratives: Indigenous Literature and Culture in the Age of Sovereignty (3)
- INS 804/EVRN 542 Special Topics: Ethnobotany (3)
- INS 804 Special Topics: Indigenous Food and Health (3)
- INS 804 Special Topics: Global Health, American Indians and Complementary Medicine (3)
- INS 807 Internship in Indigenous Nations Studies (3-6)
- INS 811 Applied Indigenous Leadership (3)
- INS 865 Grant Writing and Fund Raising (3)
- INS 8573 Native and Western Views of Nature (3)
- INS 877/LAW 975 Public Lands and Natural Resources (3)
- INS 878/LAW 980 Regulations of Air and Water Pollution (3)
- INS 879/LAW 995 Water Law (3)
- BIOL 612 Plant Ecology (3)
- BIOL 630 Conservation and Wildlife Biology (3)
- EVRN 615 Environmental Impact Assessment (3)
- GEOG 758 Geographic Information Science (3)
- GEOG 790 North American Regions: _____ (3)
- GEOG 791 Latin American Regions: _____ (3)

Preservation and Management of Indigenous Resources: Language Documentation and Revitalization (34 credit hours minimum). This concentration provides theoretical as well as practical experience in the development of curriculum and materials for Indigenous language teaching. The curriculum 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 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.

**Required Concentration Courses** (16 credit hours minimum required in addition to the core curriculum)
- C&T 822 Second Language Acquisition ....................................................... 3
- LING 710 Introduction to Linguistic Science ................................................ 3
- LING 810 Seminar in Ethnolinguistics: Language Endangerment ................. 3
- LING 740 Linguistic Data Processing (3) or LING 741 Fieldwork Methods in Linguistic Description (serves as prethesis credit) (3) .................. 3
- INS 807 Internship in Indigenous Nations Studies ...................................... 3-6
- INS 899 Master’s Thesis or nont hesis project (1 hour minimum) .................. 1

With advising, 9 credit hours of electives must be taken. Some other courses may be used to satisfy these electives with permission of the graduate director and/or advisors. Choose 9 hours from the following electives: ............................... 9

**Indigenous Nations Studies Courses**

**INS 800 Research Methods and Indigenous Peoples** (1-3). This course is an introduction to the social science methods of investigation and analysis that are used in Indigenous Nations Studies as a discipline. The nature of Indigenous Nations Studies data sources and methods of data collection, the logic of social scientific inquiry, and key methods of data analysis are emphasized. In addition, the social and educational implications of the results are examined. LEC

**INS 801 Indigenous Peoples of the World** (3). A survey of the native peoples of the world at the time of contact with Europeans. An overview will be presented of various Indigenous cultures. A few detailed studies of selected groups will be used to explore environmental settings, settlements and subsistence patterns, and the world view of the Western Hemisphere’s Indigenous societies. LEC

**INS 802 Indigenous Decolonization and Empowerment** (3). An Indigenous focus of the foundation and impact of colonization, decolonization, empowerment and nation-building. LEC

**INS 803 Issues Facing Indigenous Peoples** (3). This seminar is normally team-taught, and it explores the theories and methods of selected cultural, environmental, legal, political, and socio-economic issues confronting Indigenous societies throughout the world. Prerequisite: Successful completions of INS 800 and INS 801 with a grade no lower than a B in each course. LEC

**INS 804 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 805 American Indian Leadership** (3). Students will analyze the qualities of American Indian leadership and will examine circumstances and backgrounds of Indian leaders as heroes and role models paying particular attention to how they responded as individuals, leaders, and as community members of their tribes. Besides surveying noted Indian leaders in treaty negotiations, allotment, removal, war, etc., the course will examine leaders in medicine, education, and recent American Indian history including attention to women leaders. Students will learn about the leaders’ tribes and cultures in addition to understanding the ethnohistory of Indian-white relations. LEC

**INS 806 Directed Readings** (1-3). An individual readings course with a qualified instructor on a topic in Indigenous Nations Studies. LEC

**INS 807 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 300 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 809 Indigenous Women: Gender and Sexuality** (3). This course examines gender and sexuality among Indigenous communities in the world. Ethnographies about 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 sub-altern women and the larger society, nation and globalizing world in which they play a part. LEC

**INS 810 Indigenous Women and Activism** (3). An examination of the roles and ideological meanings of Indigenous female activists, tribes, and women. Prerequisite: Successful completion of INS 800 and INS 801 with a grade no lower than a B in each course. LEC

**INS 812 Native American Oppression, Resistance, and Liberation** (3). An interdisciplinary examination of the effects of historical and contemporary forms of colonialism and postcolonial strategies of resistance practiced by Indigenous peoples within and beyond the borders of the United States. Prerequisite: Successful completion of INS 800 and INS 801 with a grade no lower than a B in each course. LEC

**INS 824 Federal Indian Law** (2.50-3). Addresses the law and policy of the United States regarding Indian nations and their members. Issues include the origins and contours of federal plenary power over Indian affairs, the scope of inherent tribal sovereignty, the limits of state power in Indian country, civil and criminal jurisdiction, and tribal gaming. Same as LAW 914. Prerequisite: Permission from instructor. LEC

**INS 860 Suriname and the Dutch Caribbean** (2.50-3). An examination of the Dutch colonial history and the cultural and political developments in Suriname and the Dutch Caribbean. LEC

**INS 866 Indigenous Museum Management** (3). A discussion of the theory and methodology of archival collections, and an introduction to archiving as a profession. Includes a discussion of records management, with an emphasis on archival collections, archival records, disaster planning, and the importance of funding. Includes instruction and practice in curriculum design and development, and supervision of students involved in the management of archival collections. LEC

**INS 864 Exhibiting Culture** (2-3). An introduction to the history and practice of museum management, and an examination of the role of the museum in society. Topics include the history and practice of museum management, and an examination of the role of the museum in society. Topics include the history and practice of museum management, and an examination of the role of the museum in society. Topics include the history and practice of museum management, and an examination of the role of the museum in society. Topics include the history and practice of museum management, and an examination of the role of the museum in society. Topics include the history and practice of museum management, and an examination of the role of the museum in society. Topics include the history and practice of museum management, and an examination of the role of the museum in society. Topics include the history and practice of museum management, and an examination of the role of the museum in society. Topics include the history and practice of museum management, and an examination of the role of the museum in society. Topics include the history and practice of museum management, and an examination of the role of the museum in society. Topics include the history and practice of museum management, and an examination of the role of the museum in society. Topics include the history and practice of museum management, and an examination of the role of the museum in society. Topics include the history and practice of museum management, and an examination of the role of the museum in society.
planning. The course will compare and contrast museum management in European/ American museums and how these management styles affect collection policies, exhibit policies, traditional care of collections, sacred and ceremonial item handling and display, NAGPRA and repatriation, and oral histories. LEC

INS 867 Indigenous Records Management (3). A discussion of what constitutes a record and how to manage records at the business or government level. This is a second level of records management leading to preparation for taking the certification examination. LEC

INS 869 Traditions of Care of Collections (3). A discussion of on traditional care issues of handling and preserving of Indigenous belongings. The class will compare the methods of traditional care at tribal museums vs. conservation of Native items in mainstream museums. LEC

INS 871 Community Health and Development (3). This course extends knowledge and skills for addressing issues in community health and development (e.g., substance abuse, adolescent pregnancy, child and youth development, prevention of violence). Students learn core competencies such as analyzing community problems and goals, strategic planning, intervention, and evaluation, and then apply these skills to issues that matter to them and to the communities they serve. (Same as ASBC 710.) LEC

INS 873 Environmental Justice (3). An examination of the impact of environmental justice and security in Indigenous communities throughout the world with a focus on tactics and strategies that incorporate Indigenous perspectives in responses. LEC

INS 874 Natural Resource Management: Indigenous Perspectives (3). An examination of resource management issues in Indigenous communities throughout the world with a focus on tactics and strategies that incorporate Indigenous perspectives in responses. LEC

INS 875 Native and Western Views of Nature (3). A comparison of the attitudes and perspectives towards the natural world developed by different cultural traditions. A review of Western attitudes and also the traditional ecological knowledge of Indigenous peoples toward management of natural resources, non-human animals, and the natural world. LEC

INS 876 Comparative Law (2.50-3). A general introduction to and comparison of major legal systems of the world, with special emphasis given to how these systems reflect differing cultural values in addressing common legal questions. A major goal of the course is to deepen the students’ understanding of law and practice in the United States and to broaden their perspective of law beyond the boundaries of the common law system. (Same as LAW 876) Prerequisite: Permission from instructor. LEC

INS 877 Public Lands and Natural Resources (2.50-3). Devoted to the law and legal systems that govern the classification and use of one-third of America’s land mass. Includes a survey of the acquisition and disposition of the public domain; general federal statutes and doctrines that affect public land law; and different forms of federal lands classifications, including national parks, scenic rivers, and grazing lands. (Same as LAW 975) Prerequisite: Permission from instructor. LEC

INS 878 Regulations of Air and Water Pollution (2.50-3). An introduction to national environmental policy and environmental litigation problems, focusing on current issues involving government regulation of activities that generate water and air pollution. Coverage of water pollution typically will include control of point sources and oil spills, while coverage of air pollution will include control of stationary and mobile sources, acid deposition, and introduction to transboundary problems such as the greenhouse effect and global warming. (Same as LAW 980) Prerequisite: Permission from instructor. LEC

INS 879 Water Law (2.50-3). A study of water rights including the riparian and prior appropriation doctrines for surface water, and the various doctrines for groundwater. Private and public uses of water resources, and special water districts. Water pollution control. Interstate conflicts over water resources. Federal government involvement in water distribution including federal powers and programs. Indian and reserved rights. Kansas water law. (Same as LAW 985) Prerequisite: Permission from instructor. LEC

INS 882 Native American Natural Resources (2.50-3). This course provides a detailed examination of natural resource law as it applies to Indian Country. Among the topics to be discussed are water law, environmental protection, and subsurface property rights. While not a prerequisite, it is recommended that students take Federal Indian Law before enrolling in this course. (Same as LAW 987) Prerequisite: Permission from instructor. LEC

INS 883 Sovereignty, Self-determination, and Indigenous Nations (2.50-3). Examines legal, governmental, political, social, cultural, and economic issues associated with American Indian tribal sovereignty and self-determination. Includes the source and scope of tribal sovereignty; the threats to tribal sovereignty; and the methods by which tribal sovereignty can be strengthened and revitalized. (Same as LAW 987) Prerequisite: Permission from instructor. LEC


Interdisciplinary Studies

The College of Liberal Arts and Sciences offers degrees in several departments and programs that are interdisciplinary in nature. For information on these, see American Studies; East Asian Languages and Cultures; Museum Studies; Indigenous Nations Studies; International Studies; Latin American Area Studies; and Russian, East European, and Eurasian Studies in this chapter of the catalog. Courses are offered in several other areas, such as African and African-American studies, genetics, and women’s studies, but there are no graduate programs in these areas. The courses, however, may be applied to degrees in other related fields. Special studies majors in these or other interdisciplinary areas may also be authorized upon petition. See sections on Special Studies in the General Information chapter of this catalog. For interdisciplinary graduate certificates, see Graduate Certificate Programs in the General Information chapter of this catalog.

International Studies

Director: Gary Reich, greich@ku.edu, (785) 864-9053
Blake Hall, 1541 Lilac Lane, Room 409
Lawrence, KS 66045-3177

Program Assistant: Noel Rasor, noel@ku.edu, (913) 897-8510
KU Edwards Campus, 12600 Quivira Road
Overland Park, KS 66213-2402, www.intl.ku.edu

Affiliated Faculty: This program draws on the expertise of faculty from departments throughout the university, including African and African American Studies; Anthropology; East Asian Languages and Cultures; Economics; European Studies; History; Humanities and Western Civilization; Latin American Area Studies; Political Science; Russian, East European, and Eurasian Studies; Sociology; and the Schools of Business and Journalism and Mass Communications.

The Master of Arts in international studies provides an analytically sophisticated understanding of the contemporary global arena. Students pursue interests in global politics, society, and culture across a broad range of courses in the humanities and social sciences. Students develop a specialization in a world region and a topic that transcends national borders. The degree offers students the skills and knowledge to operate in a world where traditional boundaries are disappearing. The program is based at KU’s Edwards Campus in Overland Park, but students complete courses both on the Edwards Campus and on KU’s Lawrence campus.

Admission

Students are admitted for both fall and spring semesters. Applicants must submit the following materials: (1) an application with appropriate application fee, (2) one official transcript from each institution of higher education attended for undergraduate and graduate work, (3) a 500- to 1,000-word essay outlining relevant experiences and reasons for pursuing this degree, (4) a current résumé, (5) three letters of recommendation sent directly from the references, and (6) Graduate Record Examination scores (LSAT or GMAT results are acceptable substitutes). International students also must submit Test of English as a Foreign Language scores for an examination taken within the past two years. All materials must be received before the application can be evaluated.

More information about the application process can be found on the program’s Web site, www.intl.ku.edu. In general, to enter this program a student must have a bachelor’s degree from an accredited institution with at least a 3.0 grade-point average on a 4.0 scale. 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 and fee online at www.graduate.ku.edu/GAPC. Send transcripts from each college and university attended to:

The University of Kansas
Graduate Application Processing Center
Strong Hall, 1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

All other application materials should be submitted to the program assistant at the Edwards Campus address.

M.A. Degree Requirements

The Master of Arts in international studies is a 37-credit-hour degree. All students complete two core courses, INTL 701 and INTL 702, and eight graduate-level elective courses (24 credit hours). These electives must form two coherent clusters, one around a world region and the other on a topic specialization approved by the student’s adviser.

Thesis Option. Students electing to do a thesis must enroll in 6 thesis hours and 1 hour of INTL 897, complete a significant original research project approved by a faculty committee, and pass a comprehensive examination.

Nonthesis Option. Students pursuing the nonthesis option complete an additional 6 hours of electives and enroll in 1 hour of INTL 897, which requires completion of written examinations over the core course content and the student’s regional and topic concentrations as well as an oral examination.

For all students, the M.A. degree also requires evidence of current competence (equivalent to two years of successful college-level study) in a modern spoken and written language other than English; courses taken to complete this requirement generally do not count toward the degree. Students must meet all general requirements as well as program requirements.

Regional Specializations. These courses give students substantial knowledge about a selected region of the world. Up to three language courses (9 hours) at or above the 500 level may count toward this requirement. Regional specializations usually correspond to one of KU’s area studies programs:
- African and African-American Studies
- East Asian Studies
- European Studies
- Latin American Area Studies
- Russian, East European, and Eurasian Studies

A student may petition to focus on a region that does not correspond to the boundaries of the KU area studies programs. For instance, a student might choose to focus on the region of the North American Free Trade Agreement (Canada, Mexico, and the United States), the Middle East, South Asia, the Pacific Rim, or the Islamic world. The petition is granted only if the program committee and director are assured that the student has a qualified academic adviser with expert knowledge of that area.

Topic Specialization. Topic specialization courses allow the student to develop an understanding of a particular issue of interest that reaches across national and regional borders. Topics might include gender and development, international conflict, intercultural communication, international politics, globalization, international business, global urbanization, peace studies, or another topic approved by the director. The courses below are examples of electives that might be used in some of these areas; each student works with an adviser to identify appropriate courses.

International Culture and Communications focuses on issues of culture, ethnicity, diversity, and cross-cultural communications and examines how various cultures around the world deal with outside influences and define themselves as distinctive societies. Sample courses:
- AAAS 560 Race, Gender, and Post-colonial Discourses
- ANTH 674 Political Anthropology
- COMS 647 Issues in Intercultural Communication
- ENGL 774 Topics in Literatures of Africa and the African Diaspora
- HWC 500 Studies in Comparative Literature
- SOC 626 Religion and Society
- THED 683 Development of the International Sound Film

International Politics and Policies addresses foreign policy, comparative public policy, 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

Courses in the K-12 Curriculum

International Business and Economics offers a foundation in global business and economics, economic history, and political economy. Sample courses:
- MKTG 708 Global Marketing
- MGMT 705 Managing in a Global Environment
- ECON 835 Comparative Economic Systems
- HIST 509 Multinational Corporations: The Role of Money and Power
- HIST 526 Economic History of Europe (Same as ECON 535)
- IBUS 701 International Business

International Studies Courses

INTL 701 Approaches to International Studies (3). This course examines approaches to the study of culture, politics, and society as applied in international studies research. Substantive and disciplinary content vary by instructor, but typically include such topics as economic development, ethnicity, religion, democratization, peace and conflict issues, and cultural studies. The study of these topics is accompanied by discussions of the principles of theory development, proper research design, choosing a research topic, construction of literature reviews, and the use of library resources in international studies research. LEC

INTL 702 Globalization (3). A central issue in international studies is globalization, the increasing interconnectedness of societies and economies. This course examines globalization from an historical and contemporary perspective. Major topics include (but are not necessarily limited to) the historical expansion of the West since 1500, the growth of international economic institutions, conflict among global cultures, the future of state sovereignty, and the challenges of economic integration. LEC

INTL 703 The World Economy (3). An introduction to international trade and finance, theories of economic development, and international economic structures. Not appropriate for economics majors. LEC

INTL 704 Global Cultures and Societies (3). Examination of the components of culture, economic and political anthropology, major global cultural areas, and the impact of cultural differences as expressed through language, literature, religion, thought, and motivation in cross-cultural communications. LEC

INTL 705 Globalization in History (3). A study of the increasing interaction among world societies since 1500 and an investigation of the long-term developments behind current world problems. Major topics include Western expansion since 1500, the spread of state sovereignty, the formation of a world economy, and the spread of international institutions. Current issues will vary, but may include environmental crises, human rights, migration, free trade and the spread of consumer culture, ethnicity and nationalism, and international intervention within states. (Same as HIST 705) LEC

INTL 706 Comparative Governments (3). Survey of different governmental structures in the contemporary world and the ways 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
International Studies • Latin American Area Studies

INTL 793 Directed Readings (1-5). Individual and supervised readings in a selected area of international studies. Course is repeatable with permission of the program director. LEC

INTL 897 Examination Preparation (1). Independent study in preparation for the Comprehensive M.A. examination. Graded on satisfactory/unsatisfactory basis. May be repeated. LEC

INTL 899 Thesis (1-6). Enrollment for writing thesis for master’s degree. THE

Italian
See French and Italian.

Japanese
See East Asian Languages and Cultures.

Korean
See East Asian Languages and Cultures.

Latin
See Classics.

Latin American Area Studies
Chair: Elizabeth A. Kuznesof, latamst@ku.edu
Associate Director and Graduate Adviser: Peter Herlihy
Bailey Hall, 1440 Jayhawk Blvd., Room 320
Lawrence, KS 66045-7574
www2.ku.edu/~latamst, (785) 864-4213, fax: (785) 864-3800


Professors Emeriti: Adams, Casad, Chamberlin, Chambers, Doudoroff, Drayton, Duellman, Eldredge, Garland, Kleinberg, Lichtwardt, Michener, Nunley, Ridgway, Smith, Souza, Spires, Stansifer, Stokstad, Tomasek, Weiss, Woodyard


Assistant Professors: Bejarano, Chappell, Cushman, Day, Fitzgerald, Flores, Golash-Boza, Hart, Jahanbani, MacGonagle, Metz, Padilla, Rosomondo, Vasquez, Vicente, Wong

The Center of Latin American Studies administers an interdisciplinary program of substantive and language courses leading to the Master of Arts degree. Students may pursue the M.A. as a terminal degree for careers in the public or private sector or as preparation for additional graduate study. The center also offers two graduate certificates of four courses each in Brazilian Studies and Central American and Mexican Studies.

Admission
Admission requires a B.A., preferably in one of the social sciences or humanities, and language proficiency in either Spanish or Portuguese as demonstrated by completion of a fourth-semester course or the equivalent. The Graduate Record Examination is required for U.S. citizens.

Submit your application online at www.grad.ku.edu/GAPC.

Send transcripts of all completed college and university course work to

The University of Kansas
Graduate Application Processing Center
Strong Hall, 1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

Send all other requested application materials to

The University of Kansas
Latin American Area Studies Program
Bailey Hall, 1440 Jayhawk Blvd., Room 320
Lawrence, KS 66045-7574

M.A. Degree Requirements
Course Work. A minimum of 30 graduate credit hours is required in social sciences or humanities courses with Latin American content. At least 18 hours must have 50 to 100 percent of their content dedicated to Latin America. Literature courses with Latin American content at the 500-level or above (except PORT 611 and HAIT 500) may be counted as part of the 30 required hours. Required courses are LAA 700 Introduction to Latin American Library Resources, LAA 701 Interdisciplinary Seminar in Latin American Culture and Problems, and two other seminars with at least 50 percent of their content dedicated to Latin America, each in a separate discipline, at the 700 level or above (excluding thesis and readings hours). Incoming students should enroll in LAA 700 during the first fall semester. All students must consult the graduate adviser before enrollment each semester. Up to 12 graduate hours from the University of Costa Rica may be applied to the M.A. To be eligible, students must have completed one semester of course work at KU and must obtain the graduate adviser’s approval of the UCR courses.

Language Proficiency. M.A. candidates must demonstrate comprehensive proficiency in Spanish or Portuguese. This includes aural, speaking, reading, and writing ability. Completion of SPAN 424 and SPAN 428 or a higher-level course constitutes comprehensive proficiency in Spanish. Comprehensive proficiency in Portuguese requires completion of a 500-level or higher literature course. The language requirements should be satisfied as early as possible. Students also must complete two semesters in a second language (SPAN 104 and SPAN 108; PORT 104 and PORT 108), or the equivalent (e.g. PORT 611). Quichua, Kaqchikel Maya, or Haitian Creole may be substituted as the language of reading proficiency with approval of the director.

M.A. Degree Options. Thesis and nonthesis degrees are offered. The thesis degree is most appropriate as preparation for a doctoral program and dissertation. Students must declare their intention to write a thesis before the end of the first year and form a committee of three faculty members, each from a different discipline. The student defends the completed thesis in an oral ex-
amination 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 Puebla, Mexico; respectively. The center has helped develop exchange relationships with universities in Costa Rica, Paraguay, Peru and Brazil. One of the oldest and most successful academic study abroad programs in Latin America is the Kansas program at the Universidad de Costa Rica.

**Recommended Graduate Courses.** These courses have 50 to 100 percent Latin American content:

- AAAS 574 Slavery in the New World (same as HIST 574)
- ANTH 500 Topics in Archaeology: (taught by Hoopes)
- ANTH 501 Topics in Social Anthropology: (taught by Metz)
- ANTH 506 Ancient American Civilizations: Mesoamerica
- ANTH 507 The Ancient Maya
- ANTH 508 Ancient American Civilizations: The Central Andes
- ANTH 718 Seminar in Latin American Archaeology: Lower Central America
- ANTH 775 Seminar in Cultural Anthropology (taught by Dean, Gibson or Metz)
- ANTH 785 Topics in Ethnology: (taught by Dean or Metz)
- ENGL 584 Economic Development of Latin America
- ENGL 790 Studies in U.S.-Latino/a Literature
- GEOG 570 Topics in Cultural Geography: (taught by Brown or Herlihy)
- GEOG 580 Seminar in Geography: Cultural Ecology (taught by Herlihy)
- GEOG 990 Seminar in Regional Geography: Central American Indigenous Peoples (taught by Herlihy)
- HA 905 Special Study: Latin America
- HAIT 501 Directed Studies in Haitian Culture
- HAIT 700 Investigation and Conference
- HIS 510 Topics in Latin America (taught by Cushman, Rosenthal, Kuznesof)
- HIS 571 The Spanish Borderlands in North America
- HIS 573 Latin America in the 19th Century
- HIS 574 Slavery in the New World (same as AAAS 574)
- HIS 575 History of Mexico
- HIS 576 History of Central America
- HIS 577 Social History of South America
- HIS 579 The History of Brazil
- HIS 580 Economic History of Latin America
- HIS 581 Topics in Third World History: (taught by Rosenthal, Kuznesof)
- HIS 607 The Family in History: Comparative Perspectives (taught by Kuznesof)
- HIS 696 Seminar in Latin America (taught by Cushman, Rosenthal, Kuznesof)
- HIS 801 Colloquium in: (taught by Rosenthal, Kuznesof)
- HIS 808 Colloquium in Comparative History: (taught by Cushman, Rosenthal, Kuznesof)
- HIS 820 Colloquium on Popular Culture in Latin America
- HIS 821 Colloquium on Iberian and Latin American Democracy
- HIS 822 Colloquium in the Urban History of Latin America
- HIS 823 Colloquium on Colonial Latin America
- HIS 824 Seminar on Labor in Latin America
- HIS 825 Seminar in Latin American Foreign Relations
- HIS 826 Seminar in 20th-century South America
- HIS 827 Colloquium in the Social History of Latin America
- HIS 950 Seminar in Latin American History
- HIS 951 Seminar in Latin American Revolutions
- HIS 952 Seminar in Ideology, Violence, and Social Change in Latin America
- LING 505 Native American Writing
- POLS 568 Theories of Politics in Latin America
- POLS 659 Political Dynamics of Latin America
- POLS 705 Revolutionary Politics in Latin America
- POLS 777 International Relations of Latin America
- PORT 740 Survey of Brazilian Literature
- PORT 742 The Brazilian Novel
- PORT 746 The Brazilian Short Story
- PORT 750 Brazilian Poetry
- PORT 760 Contemporary Brazilian Literature
- PORT 780 Special Readings in Portuguese and Brazilian Literature
- PORT 970 Seminar in Brazilian Literature: ____________________________
- SOC 531 Global Social Change
- SOC 780 Advanced Topics in Sociology: Third-world Social Change: Women of the Third World,
- SPAN 520 Structure of Spanish
- SPAN 522 Advanced Studies in Spanish Language: ________________________
- SPAN 540 Colloquium on Hispanic Studies: ______________________________
- SPAN 560 Colloquium on Latin American Film
- SPAN 570 Studies in Hispanic Linguistics: _________________________________
- SPAN 717 History of the Spanish Language
- SPAN 720 Syntax and Composition
- SPAN 770 Spanish-American Drama
- SPAN 771 Spanish-American Literature: _________________________________
- SPAN 772 The Modern Spanish-American Novel, 1900-1950
- SPAN 773 The Modern Spanish-American Novel Since 1950
- SPAN 774 Spanish-American Poetry
- SPAN 776 Spanish-American Short Story
- SPAN 781 Spanish-American Colonial Studies
- SPAN 784 Spanish-American Modernism
- SPAN 785 Special Topics in Spanish-American Literature: __________________
- SPAN 790 Spanish Linguistics: Theory and Application to Teaching
- SPAN 795 Literary Theory and Criticism
- SPAN 817 Spanish Historical Grammar
- SPAN 970 Seminar: Spanish-American Drama: __________________________
- SPAN 974 Seminar: Spanish-American Poetry: _____________________________
- SPAN 976 Seminar: Spanish-American Short Story: ________________________
- TH&F 702 Graduate Seminar in: Latin American Film

**Recommended Graduate Courses.** These courses have 25 to 50 percent Latin American content:

- AAAS 520 African Studies in: ________________________________
- AAAS 555 African Film and Video
- ANTH 501 Topics in Social Anthropology:
- ANTH 512 Ethnography
- ANTH 544 Physical Anthropology of American Indians
- ANTH 563 Cultural Diversity in the United States
- ANTH 586 Visual Anthropology
- ANTH 595 The Colonial Experience
- ANTH 652 Population Dynamics
- ANTH 674 Political Anthropology
- ANTH 695 Cultural Ecology (taught by Gibson or Herlihy)
- ANTH 754 Biological Bases of Human Behavior (taught by Crawford)
- ANTH 770 Research Methods in Physical Anthropology
- ANTH 794 Material Culture
- ARCH 740 Architecture History/Theory IV
- ARCH 746 Site Planning
- ARCH 800 Special Topics in Architecture: City Form: The Americas (taught by Swann)
- BIOL 607 Field and Laboratory Exercises in Plant Ecology
- BIO-L 789 Field Course in Entomology
- C&I 705 International Issues in the K-12 Curriculum
- C&I 807/ELPS 743 Multicultural Education
- ECON 582 Economic Growth and Development
- ECON 604 International Trade
- ECON 605 International Finance
- ECON 715 Elementary Econometrics
- ECON 740 Theory of Economic Growth and Development
- ECON 750 The Theory of International Finance
- ECON 850 The Advanced Theory of International Finance
- ELPS 722 Philosophical Problems in Comparative Education
- ELPS 773 School and Society in Comparative Education
- ENGL 570 Topics in American Literature: _____________________________
- GEOG 570 Geography of the Americas (taught by Herlihy)
- GEOG 670 Cultural Ecology
- GEOG 775 Seminar in Population Geography
- GEOG 990 Seminar in Regional Geography: Central American Indigenous Peoples (taught by Herlihy)
- HA 905 Special Study: Latin America
- HAIT 501 Directed Studies in Haitian Language and Literature
- HIST 599 Multinational Corporations: The Role of Money and Power
- HIST 551 Spain and its Empire, 1450-1700
- HIST 572 The United States Borderlands: People, Place, Past
- HIST 630 United States Diplomacy and International History
- HIST 636 Agriculture in World History (taught by Worster)
- HIST 696 Seminar in: History of Disaster
- HIST 806 Studies in: World Environmental History
- HWC 620 Study of a Culture: _________________________________
- IBUS 701 International Business (taught by Kleinberg)
- IBUS 895 Graduate Seminar in International Business: Global Business Environment (taught by Birchen)
Latin American Area Studies • Liberal Arts & Sciences • Linguistics

LAW 930 International Law Seminar (taught by Head)
LING 579 The Structure of Language
LING 700 Introduction to Linguistic Science
LING 791 Topics in Linguistics
MGMT 720 Comparative and Cross Cultural Management (taught by Kleinberg)
MUSC 560 Music in World Cultures (taught by Wong)
MUSC 754 Music of the Baroque Era
MUSC 940 Seminar on Selected Topics in Musicology: 20th-century Hispanic Masters (taught by Schwartz-Kates)
POLS 600 Contemporary Feminist Political Theory
POL 660 The Politics and Problems of Developing Countries
POL 663 Protest and Revolution
POL 670 United States Foreign Policy
POL 672 International Political Economy
POL 682 U.S. Foreign Policy—Post-colonial World
POL 726 Public Policy in Comparative Perspective
POL 760 The Politics and Problems of Developing Countries
POL 774 International Law
POL 850 Introduction to Comparative Politics
POL 870 International Relations
POL 960 Politics of Developing Countries
POL 962 The Breakdown, Restoration, and Consolidation of Democracies
POL 973 International Political Economy
POL 974 International Mediation and Conflict Resolution
POL 978 Advanced Topics in International Relations Theory
SOC 522 American Racism and Ethnic Relations (taught by Golash-Boza)
SOC 533 Industrialization of Developing Nations
SOC 534 Comparative Racial and Ethnic Relations (taught by Golash-Boza)
SOC 619 Political Sociology
SOC 627 School and Society
SOC 873 International Political Economy
SOC 892 Teaching Seminar
SOC 970 Seminar on Special Topics in Social Conflict and Change
SPAN 801 Teaching Spanish in Institutions of Higher Learning
TH&F 902 Film Seminar in: 
UBLP 565 Planning and Environmental Values
VAE 750 Introduction to Art Museum Education
WS 560 Race, Gender, and Post-colonial Discourses (taught by Ajayi-Soyinka)
WS 600 Contemporary Feminist Political Theory
WS 601 Seminar in Women’s Studies
WS 696 Studies in:

■ Latin American Area Studies Courses

LAA 500 Directed Study in Latin American Area Studies (1-3).
LAA 501 Multilingualism and Multiculturalism in Latin America (3).
LAA 503 Race, Gender, Ethnicity, and Nationalism in Latin America (3).
LAA 504 Politics of Culture in Modern Latin America (3).
LAA 505 U.S. Latino and Latin American Film and Literature (3).
LAA 506 Race, Gender, Ethnicity, and Nationalism in Latin America, Honors (3).
LAA 602 Topics in Latin American Studies: 
LAA 634 Indigenous Traditions of Latin America (3).
LAA 665 Women, Health, and Healing in Latin America (3).
LAA 700 Introduction to Latin American Library Resources (3).
LAA 701 Interdisciplinary Seminar in Latin American Culture and Problems (3).
LAA 703 Research Colloquium on Brazil (3).
LAA 704 Research Colloquium on Central America and Mexico (3).
LAA 800 Investigation and Conference (1-2). Investigation and research of interdisciplinary topics in Latin American Studies. RSH
LAA 899 Thesis/Nonthesis (1-6). Prerequisite: Consent of instructor. THE

Liberal Arts and Sciences

No graduate degree program is offered in this area, but the following courses are offered for graduate credit.

■ Liberal Arts and Sciences Courses

LAA 500 Writing Consulting Theory and Practice (1-3). This course explores the techniques necessary to work with writers and writing across all disciplines. Students will read about and develop theories of composition, revision, response, and collaboration as they impact effective writing, consulting, and peer learning. Students design an intensive study of some area of learning and teaching writing (teaching/tutoring English as a second language, advanced literacy and technology issues in academic writing, composition pedagogy, etc.) and choose a special interest or problem to solve in the context of an administrative role by creating policy, developing curriculum, designing materials, or conducting assessments. Meets with LA&S 400. Prerequisite: Consent of instructor. LEC
LAA 740 Computers for the Classroom (1-3). “The Art and Science of Computer Presentation.” An interdisciplinary course designed to explore current technology in “Computer Presentations” (various equipment and programs), research the field of information processing, and develop applications for interactive multimedia communications. Not open to students who have received credit for LA&S 340. Prerequisite: Consent of instructor. LEC
LAA 792 Topics in: 

Linguistics

Interim Chair: Allard Jongman
Blake Hall, 1541 Lilac Lane, Room 427
Lawrence, KS 66044-3177, www.linguistics.ku.edu, (785) 864-3450
Graduate Director: Allard Jongman, 422 Blake Hall, (785) 864-2384
Professors: Jongman, Rosen
Professors Emeriti: Ingenmann, Miner, Percival, Rankin, Watkins, Yamamoto
Associate Professors: Pye, Sereno
Assistant Professor: Fiorentino, Gabrielle, Torrence, Zhang

Admission

Applicants must submit transcripts for all post-secondary work, evidence of a baccalaureate degree (preferably with a major in linguistics or a related field), three letters of recommendation, and Graduate Record Examination scores. Applicants who are not native speakers of English must demonstrate English proficiency with Test of English as a Foreign Language scores of at least 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 online at www.graduate.ku.edu/GAPC.

Since 1970, KU has maintained the only Latin American Studies resource center in the Great Plains.

Since 1976, federal fellowships have been awarded yearly for graduate study of Latin America.

Linguistics offers courses in first- and second-language acquisition, Native Mesoamerican writing, and the structure of North American Indian languages.
M.A. Degree Requirements

Prerequisites. Three credit hours of linguistics (LING 700 or equivalent) and reading ability in a foreign language (not English) with a significant linguistics literature. Students who do not meet these prerequisites but have undergraduate majors in related fields (such as a foreign language, English, speech, anthropology, or psychology) may be accepted with the provision that they make up deficiencies as soon as possible.

Degree Requirements. The following are minimum requirements.

Course Work: 33 credit hours of graduate work including

LING 794 Proseminar
LING 705 Phonetics I
LING 712 Phonology I
LING 725 Syllabics I
LING 709 Introduction to Language Acquisition or
LING 715 Linguistics and Second Language Acquisition
LING 735 Psycholinguistics or LING 738 Introduction to Neurolinguistics

One of the following research methods courses:
LING 720 Research Methods in Linguistics
LING 740 Linguistic Data Processing
LING 741 Field Methods in Linguistic Description
LING 782 Research Methods in Child Language

Twelve credit hours of electives to be determined by the student and the student’s adviser, excluding LING 998 Independent Study.

M.A. students can complete the degree either by writing a thesis and passing a thesis oral defense or by passing a written comprehensive examination and satisfying a research component.

Thesis Option: A maximum of 3 hours of thesis credit may be applied toward the minimum of 33 hours for the degree. The thesis must be defended successfully in an oral examination.

Comprehensive Examination Option: A comprehensive written examination is taken no later than the semester in which the student completes 33 hours of course work applicable to the M.A.

Students taking the comprehensive examination also must satisfy a research component by taking a course with a significant research component (e.g., a seminar or LING 707, LING 709, or LING 741) or writing a detailed research or grant proposal.

Ph.D. Degree Requirements

Prerequisites. M.A. in linguistics with a thesis. A student entering the Ph.D. program without courses equivalent to these must take them as soon as they are offered, even if they would conflict with an advanced course for which the student is eligible.

Residence. Two semesters, which may include one summer session, must be spent in full-time resident study at KU. Normally 9 credit hours is considered full-time during the semester. See General Regulations in the General Information chapter of this catalog.

Research Skills

1. Language Requirement: Reading ability in a foreign language (not English) with a significant linguistics literature.

2. Research Skills Requirement: One of the following:

A course in statistics
A course in a computer programming language
LING 783 Computational Linguistics

The student also is expected to know such additional languages as may be necessary for research.

Minimum Course Requirements. Twenty-four credit hours, consisting of

Methods Requirement: LING 741 Field Methods in Linguistic Description
If already taken for M.A., replace with one of the following:
LING 720 Research Methods in Linguistics
LING 740 Linguistic Data Processing
LING 782 Research Methods in Child Language
Three of the following second-level courses:
LING 707 Phonetics II
LING 714 Phonology II

LING 716 Second Language Acquisition II
LING 726 Syntax II
LING 727 Morphology
LING 737 Psycholinguistics I
LING 822 Seminar on Acquisition of Language
Four elective courses in linguistics (12 credit 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

With the Department of Speech-Language-Hearing: Sciences and Disorders, linguistics operates the Undergraduate Instructional Laboratory in Phonetics and Speech Science. The department has a fully equipped phonetics and psycholinguistics laboratory (KUPPL), a second language acquisition research laboratory, a neurolinguistics research laboratory, a small departmental library, a student computer laboratory, and tape recorders for field work.

Linguistics Courses

LING 539 The Acquisition of Morphantsy (3).
LING 543 Language and Culture in Arabic-speaking Communities (3).
LING 565 Native Mesoamerican Writing (3).
LING 570 The Structure of Japanese (3).
LING 572 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 308. LEC
LING 705 Phonetics I (3). This course provides a basic introduction to the study of human speech sounds. Topics to be covered include anatomy and physiology of the speech production apparatus, transcription and production of the world’s sounds, basic acoustics, computerized methods for speech analysis, acoustic characteristics of speech sounds, stress, and intonation. A ‘hands on’ laboratory project is part of the course. Prerequisite: An introductory linguistics course. LEC
LING 707 Phonetics II (3). This course is a continuation of Phonetics I (LING 705) and provides a more detailed survey of acoustic and auditory phonetics. Topics to be covered include vocal tract acoustics, quantal theory, speaker normalization, theories of speech perception, prosody, the phonetics of second language acquisition, and the perception and perception of cues to gender, talker, region, and socio-economic status. In addition, research on a number of laboratory projects will be required. Prerequisite: LING 705, LEC
LING 708 Problems in Linguistic Analysis (3). Practice in applying the techniques of phonological, grammatical, and syntactic analysis learned in introductory linguistics to data taken from a variety of languages of different structural types. Prerequisite: An introductory course in linguistics. Not open to students who have taken LING 308. LEC
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). This course is an introduction to phonological theory. It focuses on crucial phonological concepts such as underlying and surface representations, phoneme and allophone, contrast, alternation, neutralization, distinctive features, and syllable. It provides the basic skill set for phonological analysis, including UR selection, rule notation, rule ordering, and common phonological universals. It also touches on theory-building in phonology, with discussions on the external motivations for phonological grammar, how to lay out the predictions of a theoretical proposal, and how phonological predictions can be empirically tested. Prerequisite: LING 705, LEC
LING 714 Phonology II (3). This course is a continuation of a survey of phonological theory. It focuses on crucial phonological concepts such as underlying and surface representations, phoneme and allophone, contrast, alternation, neutralization, distinctive features, and syllable. It provides the basic skill set for phonological analysis, including UR selection, rule notation, rule ordering, and common phonological universals. It also touches on theory-building in phonology, with discussions on the external motivations for phonological grammar, how to lay out the predictions of a theoretical proposal, and how phonological predictions can be empirically tested. Prerequisite: LING 712, LEC
LING 715 Linguistics and Second Language Acquisition (3). Introduction to the study of second language acquisition: The application of theoretical linguistics to the description of the language a learner acquires, and to the process of acquisition. Prerequisite: An introductory course in linguistics. LEC
LING 716 Linguistics and Second Language Acquisition II (3). This advanced course will provide in-depth readings and discussion of several current linguistics including second language acquisition within a generative framework, processing approaches to second language acquisition, and the role of input and learnability principles in second language acquisition. Both theoretical and methodological is-
LING 720 Research Methods in Linguistics (3). This course provides a foundation for designing, conducting, and critically evaluating quantitative and qualitative research in the language sciences. Topics include formulating a research hypothesis, participant selection, ethics in research, the scientific method, data collection, dependent and independent variables, descriptive and inferential statistics. This course will serve students who are interested in the basics of research design and statistics for the study of language. Prerequisite: An introductory course in linguistics. LEC

LING 725 Syntax I (3). A Functional and Typological Approach (3). Different language systems 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, and dative. Basic word order typology and discourse functions such as topic, focus, and cohesion are introduced. Examples will be drawn from a wide variety of languages to illustrate how the same concept may be expressed differently in syntactically or lexically in different languages. Prerequisite: An introductory course in linguistics. LEC

LING 720 Syntax I (3). The basics of theoretical syntax, examining the principles of the 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 functional syntax, lexical identity, representation, and the relation between syntax and the semantic module. Prerequisite: LING 725. LEC

LING 727 Morphology (3). An exploration of several topics in word structure and formation in traditional and non-traditional areas: traditional morphology, morphology, and morpho-syntax. Traditional morphology includes a survey of several kinds of word formation processes, the internal structure of words, morpheme types, inflection, paradigms, derivation, and compounding. Morpho-phonology deals with phonological constraints on morphological processes and presodic morphology. Morpho syntax concentrates on the syntactic properties of morphological phenomena and interaction of syntactic processes and morphology. The course has a strong emphasis on cross-linguistic and typological morphology. Prerequisite: LING 712, LING 725, or permission of instructor. LEC

LING 730 Linguistics in Anthropology (3). The study of language as it concerns anthropology. Language systems in relation to culture, language taxonomy, semantics, and phonetic transcription. Prerequisite: LING 716 or permission of instructor. ANTH 730. LEC

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 language. Questions that arise in representing the meanings of natural language sentences in a formalized language. Prerequisite: LING 725. LEC

LING 735 Psycholinguistics (3). A detailed examination of issues in the processing of language. The course will provide a survey of research and theory in psycholinguistics, reflecting the influence of linguistic theory and experimental psychology. Spoken and written language comprehension and language production processes will be examined. Prerequisite: LING 735 or PSYC 733. LEC

LING 737 Psycholinguistics II (3). An in-depth examination of selected topics in psycholinguistics. Topics may include spoken language processing, written language processing, psycholinguistics, prosody, and syntactic processing. (Same as PSYC 737.) Prerequisite: LING 735 or PSYC 733. LEC

LING 738 Introduction to Neurolinguistics (3). We will explore how language is represented and processed in the human brain. This will include a critical survey of the foundations and the newest state-of-the-art research in the cognitive neuroscience of language. We will focus on the techniques of functional brain imaging (fMRI, PET, EEG, MEG, and related methods), and research on aphasia and other language disorders. This course will also include a laboratory component providing hands-on experience with brain imaging research on language. Prerequisite: LING 705 or LING 712 or LING 725 or LING 731. LEC

LING 739 The Acquisition of Morphosyntax (3). A second semester course in child language which explores the acquisition of morphology, syntax and the ways in which morphology and syntax interact in linguistic theory and language development. Topics covered in the course include agreement, case, null subjects, question formation, pronoun binding, quantification, and control. LEC

LING 740 Psycholinguistic Data Processing (3). The tools and techniques necessary to analyze psycholinguistic text and data, including research design, recording and elicitation techniques, computational data processing and analysis, and fMRI. Techniques of research, field recording, and data analysis technology. Methods of phonetic transcription, grammatical annotation, and analysis of language context. Practice of techniques through the study of at least one language. (Same as ANTH 741.) 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. Practice of techniques through the study of at least one language. (Same as ANTH 741.) Prerequisite: LING 705 or permission of instructor. LEC

LING 748 Language Contact (3). Theories and case studies of languages in contact. Areal and genetic linguistics, genesis of pidgins and creoles, multilingualism, social, political, economic, and geographic factors of language change. (Same as ANTH 748.) Prerequisite: LING 749. LEC

LING 749 Linguistics and Ethnolinguistics of China and Central Asia (3). Selected topics in Linguistics and Linguistic Anthropology, focusing on dominant and/or minority languages of China, Central Asia, or a particular region of Cen- tral and Eastern Eurasia. Topics may include any subfield of linguistics, including language contact, typology, dialectology, and sociolinguistics. Topic for semester to be announced. (Same as ANTH 749.) Prerequisite: A course in Linguistics. LEC

LING 750 Comparative and Historical Linguistics (3). Genetic and typological classification, typological and historical linguistics, and methods of the development of writing and interpretation of written evidence, reconstructive methodology. Prerequisite: Six hours of linguistics, including phonetics. LEC

LING 753 The Indo-European Language Family (3). A survey of the Indo-European language family: its members, divisions, and history; with an introduction to com- parative and historical linguistics. Prerequisite: LING 700 and a reading knowledge of French or German. LEC

LING 782 Research Methods in Child Language (3). A survey of methods for studying phonological, morphological, syntactic, and semantic change during language development. Methods include: diary interpretation, language sample analysis, probe elicitation tasks, and clinical assessment. (Same as PSYC 782.) Prerequisite: LING 735 or equivalent or consent of instructor. LEC

LING 783 Computational Linguistics (3). A survey of computer-based approaches to the study of phonology, morphology, and syntax. In addition to its relevance for basic linguistic research, computer-based work on phonology is central to current research in speech analysis, speech synthesis, and the major artificial intelligence effort described as speech understanding. Computer-based morphological analysis is of theoretical interest to the linguist as well as a major component in content analysis, information retrieval, and other related application areas. Computer- based parsers and syntactic/string generators provide model testers for the lin- guistics student. LEC

LING 791 Topics in Linguistics: _____ (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 re- search literature and research methods used by linguists. May be repeated for credit. Graded on satisfactory/unsatisfactory basis. LEC

LING 799 Proseminar in Child Language (2). A review and discussion of current issues in the study of child language acquisition. May be repeated for credit. Graded S/F. (Same as ABS 799, PSYC 799 and SPPH 799). (Formerly HDFL 797). LEC

LING 810 Seminar in Ethnolinguistics (3). An exploration of several topics in word structure and formation. Prerequisite: LING 725 or consent of instructor. 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 relation- ships, and reconstruction in isolated and/or minority languages of China, Central Asia, or a particular region of Central and Eastern Eurasia. Topics may include any subfield of linguistics, including language contact, typology, and historical linguistics. Prerequisite: LING 750 or LING 753. LEC

LING 860 Seminar in Second Language Acquisition (3). Analysis of recent theoretical and methodological issues in the study of second language acquisition. Prerequisite: LING 716 or permission of instructor. LEC

LING 899 Master’s Thesis (1-3). Intensive study of varying topics in this area. May be repeated. Graded as satisfactory/unsatisfactory. 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. Prereq- uisite: Students who have had prior knowledge of a language other than English. May be repeated. Graded as satisfactory/unsatisfactory. LEC

LING 997 Ph.D. Examinations (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 sub- mitting answers to the written preliminary examination. May be taken for a maxi- mum 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. S/FRW
Mathematics

Chair: Jack Porter
Snow Hall, 1460 Jayhawk Blvd., Room 405
Lawrence, KS 66045-7523, www.math.ku.edu, (785) 864-3651
Graduate Director: Rodolfo Torres, 546 Snow Hall, (785) 864-3651
Associate Professors: Gavosto, Gay, Kachi, Liu, Purnaprajna, Stanislavova, Stefanov, Xu
Assistant Professors: Feng, Han, Martin, Oh, Talata

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 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 the undergraduate mathematics major 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 may be admitted, possibly on probationary status.

Submit your application online at www.graduate.ku.edu/GAPC. Send transcripts of all completed college and university course work to

The University of Kansas
Graduate Application Processing Center
Strong Hall, 1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535
Send all other requested application materials to

The University of Kansas
Department of Mathematics
Snow Hall, 1460 Jayhawk Blvd., Room 405
Lawrence, KS 66045-7523

M.A. Degree Requirements

A candidate must fulfill general requirements. 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 these options:

Option A. Pass the departmental Ph.D. written qualifying examinations and complete 30 hours of courses at the 700 level or higher, of which 12 hours are at the 800 level or higher.

Option 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. 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 790, and MATH 791. Complete a research component and pass an oral examination. At least 24 of the 36 hours must be in courses numbered 700 or above. Course equivalents to MATH 727, MATH 765, MATH 781, MATH 790, or MATH 791 may be substituted if approved by the graduate studies committee. 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, submit 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 896, MATH 899, MATH 990, MATH 993, or advanced courses). An M.A. candidate must demonstrate an ability to communicate mathematics both orally and in written form. An M.A. candidate not selecting the thesis option (MATH 899) is expected to write a technical report as part of his or her research component. Also, a candidate must give a short (30 to 60 minutes) presentation of her or his 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. 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 selecting 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.

Linguistics • Mathematics

Students in mathematics can design programs with emphases ranging from one of the fields of pure mathematics to one of the fields of applied mathematics and statistics.

Twenty-five KU students have become Rhodes Scholars since the program began.
Ph.D. Degree Requirements

In addition to general requirements, 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 a 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).

Applied Mathematics. This track requires MATH 727 (or the corresponding qualifying examination): MATH 781 (or the corresponding qualifying examination): MATH 800; MATH 810; MATH 881 and MATH 882 or MATH 865 and MATH 866 or MATH 850 and MATH 851; and one of MATH 840, MATH 850, or MATH 950.

The student must complete four additional courses at the 800 level or above before the final examination. Mathematics courses at the 700 level, or courses outside the department at the 700 level or higher, may be substituted with the approval of the graduate studies committee.

Normally the work required to prepare a student for the oral comprehensive examination (and to do research) includes one or more semesters of advanced courses, directed readings, and seminars. In the oral comprehensive examination, a student must show proficiency in the chosen area of mathematics. Precise areas of responsibility on this examination should be discussed in detail with the advisory committee (the student’s adviser and two other members of the department’s graduate faculty). This should be done as soon as possible and a letter sent to the student from the advisory committee well before the examination, stating these responsibilities.

In addition to general time constraints, the department requires the following:

1. The qualifying examinations are to be completed by the beginning of the student’s fifth semester. Each qualifying examination is to be passed within three semesters of completion of the highest preparatory course.

2. The preliminary examination must be completed by the beginning of the student’s eighth semester.

3. The oral comprehensive examination is to be taken no later than the end of the second semester following the semester during which the student passes the preliminary examination.

Mathematics Courses

MATH 500 Intermediate Analysis (3).
MATH 510 Introduction to the Theory of Computing (3).
MATH 520 Intermediate Logic (3).
MATH 526 Applied Mathematical Statistics I (3).
MATH 530 Mathematical Models I (3).
MATH 531 Mathematical Models II (3).
MATH 540 Elementary Number Theory (3).
MATH 542 Vector Analysis (3).
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 Time Series Analysis (3).
MATH 624 Discrete Probability (3).
MATH 627 Probability (3).
MATH 628 Mathematical Theory of Statistics (3).
MATH 631 Operations Research (3).
MATH 646 Complex 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 696 Special Topics: (1-3).
MATH 699 Directed Reading (1-3).
MATH 701 Topics in Mathematics for Teachers: (1-6). Material, including both mathematical content and teaching methodology, related to classroom use at various levels in elementary, secondary, or higher institutions. May not be counted for junior-senior credit towards a major in mathematics, nor for graduate credit towards a graduate degree in mathematics. Prerequisite: Permission of instructor. RSH.
MATH 715 Sampling Techniques (3). Statistical methodology of survey sampling. Data analysis and estimation methods of various types of random samples, pre- and post-stratified samples, and multistage sampling. Estimates of means, totals, etc. 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 Gödel’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; the inclusion-exclusion principle; Ramsey’s theorem; Spender’s theorem and related results. LEC.
MATH 725 Graph Theory (3). Graphs; trees; connectivity; Menger’s theorem; eulerian and hamiltonian graphs; planarity; coloring of graphs; factorization of graphs; matching theory; alternating chain methods; introduction to matroids with applications to graph theory. LEC.
MATH 727 Probability Theory (3). A mathematical introduction to premeasure-theoretic probability. Topics include probability spaces, conditional probabilities and independence, 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 theorems. Prerequisite: MATH 123 or equivalent. LEC.
MATH 728 Statistical Theory (3). N Theory of point estimation and hypothesis testing with applications. Confidence region methodologies and relations to 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 123 or equivalent. LEC.
MATH 745 Number Theory II (3). Analytic number theory. Prerequisite: MATH 740 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. Stochastic methods of identification and control of discrete and continuous-time linear 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 123 or equivalent. LEC.
MATH 766 Introduction to the Theory of Functions II (3). A continuation of MATH 765. Prerequisite: MATH 765. LEC.
MATH 780 Numerical Analysis of Linear Systems (3). Computational aspects of linear algebra, linear equations and matrices, direct and indirect methods, eigenvalues and eigenvectors of matrices, error analysis. Prerequisite: MATH 590 and MATH 781. LEC.
MATH 781 Numerical Analysis I (3). Finite and divided differences. Interpolation, numerical differentiation, and integration. Gaussian quadrature. Numerical integration of ordinary differential equations. Curve fitting. (Same as EECS 781.) Prerequisite: MATH 520 and knowledge of a programming language. LEC.
MATH 782 Numerical Analysis II (3). Direct and iterative methods for solving systems of linear equations. Numerical solution of partial differential equations. Numerical determination of eigenvectors and eigenvalues. Solution of nonlinear equations. (Same as EECS 782.) Prerequisite: MATH 781. LEC.
MATH 783 Applied Numerical Methods for Partial Differential Equations (3). Finite difference methods applied to particular initial-value problems (both parabolic and hyperbolic), to illustrate the concepts of convergence and stability and to provide a
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.

Fifty-three KU students have won Goldwater Scholarships for excellence in science and mathematics since the award was established in 1989.
Mathematics • Museum Studies

algebras, crossed products C*-algebras, extensions of C*-algebras and the BDF theory. Prerequisite: MATH 811 or MATH 990, or consent of instructor. LEC

MATH 970 Analytic K-Theory (3). K0 for rings, spectral theory in Banach algebras, K1 for Banach algebras, Bott periodicity and six-term cyclic exact sequence. Prerequisite: MATH 792 and MATH 960. LEC

MATH 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 999 Doctoral Dissertation (1-10). THE

Meteorology

See Geography.

Microbiology

See Biological Sciences: Molecular Biosciences.

Molecular Biosciences

See Biological Sciences: Molecular Biosciences.

Museum Studies

Director: John E. Simmons
Bailey Hall, 1440 Jayhawk Blvd., Room 208
Lawrence, KS 66045-7574, www.ku.edu/~museumst, (785) 864-2306

Museum Studies Faculty Advisory Committee: Hardy (Spencer Museum of Art), Hoopes (Anthropology), Krishtalika (Ecology and Evolutionary Biology), Lester (American Studies), Lieberman, (Geology), Sivan (History)

The graduate program 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 at KU are broad, including anthropological collections, 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’s core courses provide a solid foundation in 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: American studies, anthropology, geology, history, or natural history. Graduates undertake professional responsibilities in museums, historical agencies, and related institutions.

A faculty advisory committee 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 anthropology collections, 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 which cooperate arrangements can be made.

Admission

The student must hold a baccalaureate degree and have at least a B (3.0 on a 4.0 scale) grade-point average in previous academic work to be considered for admission to regular graduate status. 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 faculty advisory committee in consultation with the department responsible for the academic track most pertinent to the applicant’s career interests.

Submit your application online at www.graduate.ku.edu/GAPC. Send transcripts of all completed college and university course work to

The University of Kansas
Graduate Application Processing Center
Strong Hall, 1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

Send all other requested application materials to

The University of Kansas
Museum Studies Program
Bailey Hall, 1440 Jayhawk Blvd., Room 208
Lawrence, KS 66045-7574

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, 18 hours of professional and subject-matter courses in the student’s designated disciplinary track (American studies, anthropology, geology, history, or natural history), and 6 hours of a supervised internship in an approved museum or historical agency. 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 Collection Conservation

The one-year graduate certificate program offers selected graduates 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 participants 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 771, BIOL 785, GEOL 783, and HIST 728.) Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC

MUSE 702 The Nature of Museums (3). The purpose of this course is to provide an overview of the kinds of museums, their various missions, and their characteristics and potentials as research, education, and public service institutions responsible for collections of natural and cultural objects. (Same as AMS 720, BIOL 785, GEOL 782, and HIST 720.) Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC

MUSE 703 Introduction to Museum Exhibits (3). Presentation of principles and practices of exhibit management, design, and production. Topics will include developing a master plan for museum exhibits; concept development; design, installation, and maintenance of exhibits; design theory; design process; label writing; and editing; selection of materials and 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 730, BIOL 785, GEOL 781, and HIST 725.) Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC

MUSE 704 Principles and Practices of Museum Collection Management (3). Lecture, discussion, and laboratory exercises on the nature of museum collections, their associated data, and their use in scholarly research; cataloging, storage, fumigation, automated information management and related topics will be presented for museums of art, history, natural history and anthropology. (Same as AMS 730, BIOL 785, GEOL 785, and HIST 725.) Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC
MUSE 705 Introduction to Museum Public Education (3). Consideration of the goals of an institution’s public education services, developing programs, identifying potential audiences, developing audiences, and funding. Workshops and demonstrations are designed for students to gain practical experience working with various programs and developing model programs. (Same as AMS 797, BIOL 784, GEOl 784, and HIST 721.) Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC

MUSE 706 Conservation Principles and Practices (3). This course will acquaint the future museum professional with problems in conserving all types of collections. Philosophical and ethical approaches will be discussed, as well as the changing practices regarding conservation techniques. Emphasis will be placed on detection and identification of causes of deterioration in objects made of organic and inorganic materials, and how these problems can be remedied. Storage and care of objects will also be considered. (Same as AMS 714, BIOL 780, and HIST 722.) Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC

MUSE 707 Practical Archival Principles (3). Study of the principles and practices applicable to the preservation, care, and administration of archives and manuscripts. Practical experience will be an integral part of this course. (Same as HIST 727.) LEC

MUSE 710 Current Trends in Curation and Collection Management (2). Seminar course to provide students with a working knowledge of the primary issues and current trends in building, administration, and care of scientific collections. Topics include permits, collecting, accessioning, cataloging, preservation, and management, and access to collections and data. The course format consists of readings, lectures, guest speakers, discussions, and visits to scientific collections on campus. (Same as BIOL 706.) LEC

MUSE 780 Special Topics: ___ (1-3). Advanced courses on special topics in museum studies, given as need arises. Lectures, discussions of readings, and guest speakers. Topic for semester to be announced. Prerequisite: Graduate standing in Museum Studies Program or permission of instructor. LEC

MUSE 782 Seminar in Current Museum Topics: ___ (1-2). In-depth examination of specific topics currently of concern to museums and museum professionals. Topic for semester to be announced. Prerequisite: Graduate standing in Museum Studies Program, or permission of museum director. LEC

MUSE 790 Advanced Study (1-3). Individual research in a specialized topic not ordinarily treated in a Museum Studies core course for which there is a member of the graduate faculty competent and willing to direct a research project. Prerequisite: Consent of instructor. RSH

MUSE 792 Directed Readings (1-3). Directed reading in an area of Museum Studies in which there is no particular course in the Museum Studies Program or in cooperation with a museum. In cooperation with a museum or museum. Topic for semester to be announced. Prerequisite: Graduate standing in Museum Studies Program, or permission of instructor. LEC

MUSE 795 Museum Apprenticeship (1-6). Provides directed, practical experience in research, collection, care, and management, public education, and exhibits with emphasis on the particular requirements of each student. (Same as AMS 797, ANTH 799, BIOL 723, and HIST 799.) FLD

MUSE 910 Materials Conservation (3). Preservation and collection conservation theory and principles, including condition reporting, conservation of furniture and wooden objects, inorganic-based materials, metal objects, organic-based materials, paintings, photographic materials, textiles, three-dimensional objects, and works on paper. LEC

MUSE 930 Preventive Conservation (3). Theory and principles of preventive conservation, with emphasis on its application to storage environment quality, archival supports and housings, basic bookbinding, composite objects, integrated pest management, light and lighting, paper evaluation and mending, temperature, and relative humidity. LEC

MUSE 940 Conservation Assessment (3). Understanding the conservator-curatorial relationship; principles of conservation assessment, documentation, conservation research, environmental monitoring, handling objects, photographic documentation, and development of a publishable preservation research project. LEC

MUSE 980 Advanced Conservation (3). Application of conservation theory and practice to exhibition development, planning, and preparation; conservation bookbinding; health and safety in conservation; integrated pest management; ethics of conservation; parameters of professional conservation practice. LEC

Neurosciences

See the School of Pharmacy chapter of this catalog.

Philosophy
Chair: Thomas Tuozzo, ttuozzo@ku.edu
Wescoe Hall, 1445 Jayhawk Blvd., Room 3090
Lawrence, KS 66045-7590, www.philosophy.ku.edu, (785) 864-2330
Graduate Adviser: Ben Eggleston, be75@ku.edu,
3070 Wescoe Hall, (785) 864-2332
Professors: Brice, Cudd, DeGeorge, Genova, Marquis, Martin, Woelfel
Professors Emeriti: Cole, Verdu
Associate Professors: Darby, Robertson, Tuozzo
Assistant Professors: Edwards, Eggleston, Jenkins

The department offers graduate programs in philosophy leading to the M.A. and Ph.D. degrees. With the School of Law, the department also offers a joint program in law and philosophy leading to the J.D. in law and the M.A. in philosophy.

Admission
Applicants are expected to have taken the following seven courses or their equivalents as preparation for graduate work: symbolic logic, history of ancient philosophy, history of modern philosophy, history of 20th-century analytic philosophy (roughly from Frege to Quine), history of 19th/20th-century Continental philosophy, value theory, and metaphysics/epistemology (broadly construed to include philosophy of language and philosophy of mind).

Students may be admitted without some of these courses, but they are expected to make up the deficiencies early in their graduate careers. The department also requires Graduate Record Examination scores (verbal, quantitative, and analytical writing).

Animals listed online at www.graduak.edu/GAPC.

Send transcripts of all completed college and university course work to:

The University of Kansas
Graduate Application Processing Center
Strong Hall, 1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

Send all other requested application materials to:

The University of Kansas
Department of Philosophy
Wescoe Hall, 1445 Jayhawk Blvd., Room 3090
Lawrence, KS 66045-7590

M.A. Degree Requirements

The department offers thesis and nonthesis M.A. options. Both require at least 30 credit hours of graduate work in philosophy with a grade of B or higher. At least 15 of these hours must be in courses numbered 800 or above and, for the thesis option, may include 6 hours of PHIL 899 Master’s Thesis. Students must complete two courses at the 500 level or above (or the equivalent) in each of these areas: history of philosophy, metaphysics and epistemology (broadly construed), and value theory. Courses taken during the undergraduate career may be counted toward these area requirements, but such work does not count toward the overall 30-hour graduate credit requirement unless the student took this course work for graduate credit and it is acceptable to the department. A student also must take PHIL 800 Tutorial in the first year.

Museum studies students may draw on the resources of KU’s Natural History Museum, Spencer Museum of Art, and Spencer Research Library.

The Department of Philosophy offers graduate course work in applied ethics.
MUSE 705 Introduction to Museum Public Education (3). Consideration of the goals of an institution’s public education services, developing programs, identifying potential audiences, developing audiences, and funding. Workshops and demonstrations are designed for students to gain practical experience working with various programs and developing model programs. (Same as AMS 797, BIOL 784, CEOL 784, and HIST 723.) Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC

MUSE 706 Conservation Principles and Practices (3). This course will acquaint the future museum professional with problems in conserving all types of collections. Philosophical and practical approaches will be discussed, as well as the changing practices regarding conservation techniques. Emphasis will be placed on detection and identification of causes of deterioration in objects made of organic and inorganic materials, and how these problems can be remedied. Storage and care of objects will also be considered. (Same as AMS 797, CEOL 784, and HIST 723.) Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC

MUSE 707 Practical Archival Principles (3). Study of the principles and practices applicable to the preservation, care, and administration of archives and manuscripts. Practical experience will be an integral part of this course. (Same as HIST 727.) LEC

MUSE 710 Current Trends in Curation and Collection Management (2). Seminar course to provide students with a working knowledge of the primary issues and current trends in building, administration, and care of scientific collections. Topics include permits, collecting, accessioning, cataloging, preservation, preventive conservation, and access to collections and data. The course format consists of readings, lectures, guest speakers, discussions, and visits to scientific collections on campus. (Same as BIOL 706.) LEC

MUSE 711 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, CEOL 784, and HIST 723.) Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC

MUSE 712 Seminar in Current Museum Topics: ____ (1-2). In-depth examination of specific topics currently of concern to museums and museum professionals. Topic for semester to be announced. Prerequisite: Graduate standing in Museum Studies Program, or permission of instructor. LEC

MUSE 713 Advanced Study (1-3). Individual research in a specialized topic not ordinarily treated in a Museum Studies core course for which there is a member of the graduate faculty competent and willing to direct a research project. Prerequisite: Consent of instructor. RSH

MUSE 714 Directed Readings (1-3). Directed reading in an area of Museum Studies in which there is no particular course in the Museum Studies program or in cooperating departments that meets the needs of the graduate faculty competent and willing to direct a program study. Prerequisite: Consent of instructor. IND

MUSE 715 Museum Apprenticeship (1-6). Provides directed, practical experience in research, collection, care, and management, public education, and exhibits with emphasis on exhibition design. Suitable only for the particular requirements of each student. (Same as AMS 797, ANTH 799, BIOL 799, CEOL 723, and HIST 799.) FLD

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Philosophy

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Museum studies students may draw on the resources of KU’s Natural History Museum, Spencer Museum of Art, and Spencer Research Library.

The Department of Philosophy offers graduate course work in applied ethics.
Joint J.D./M.A. Degree Program

The joint degree program leading to the J.D. and the M.A. in philosophy develops a student’s understanding and appreciation of the converging disciplines of law and philosophy. The program combines into three years and one summer session the normal three-year J.D. program offered by the School of Law and the three-semester M.A. in philosophy program offered by the Department of Philosophy in the College of Liberal Arts and Sciences. Students must complete 81 credit hours in law and 21 credit hours in philosophy. The J.D. and M.A. diplomas are awarded concurrently after completion of joint degree program requirements.

Admission. The program is open to those who have earned bachelor’s degrees from accredited colleges or universities and whose undergraduate academic records indicate that they have the capacity to complete the program. Applicants must meet the admission requirements of the School of Law and the Department of Philosophy. They must apply and be admitted to each school separately before entering the first year. The Law School Admission Test is the only required entrance examination for School of Law applicants. All admission requirements (except Graduate Record Examination scores) and prerequisites for the philosophy graduate program also apply. A student who decides to enter the program while enrolled in the first year of the J.D. or M.A. in philosophy must consult and obtain approval from the School of Law, the Department of Philosophy, and the College of Liberal Arts and Sciences. No student may enter the combined program after completing more than 30 credit hours in the law school or 12 hours in the Department of Philosophy.

Typical Enrollment Pattern for J.D./M.A. Program

<table>
<thead>
<tr>
<th>First Year (32 credit hours)</th>
<th>Second Year (26 credit hours)</th>
<th>Third Year (31 credit hours)</th>
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<tr>
<td>Law courses ...........................................</td>
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<td>Law courses ...........................................</td>
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<tr>
<td>Philosophy courses ...................................</td>
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</table>

Joint J.D./M.A. Degree Requirements

<table>
<thead>
<tr>
<th>Law courses required of all J.D. candidates</th>
<th>Law courses required for joint degree candidates</th>
<th>Philosophy courses required for joint degree candidates</th>
<th>Additional law courses</th>
<th>Additional philosophy courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>44</td>
<td>9</td>
<td>9</td>
<td>28</td>
<td>12</td>
</tr>
</tbody>
</table>

Total minimum credit hours required: 102

Ph.D. Degree Requirements

A student preparing for a doctorate in philosophy must meet general requirements, and before officially enrolling in PHIL 999 Dissertation, must satisfy these special requirements:

1. Overall Hours Requirement: Complete at least 48 credit hours of graduate work in regular philosophy courses numbered 800 or above with grades in each course of at least B and an overall grade-point average higher than B in all graduate philosophy courses. At least 24 of these hours must be at the 800 level or above (including PHIL 800 Tutorial and PHIL 901 Ph.D. Tutorial). Beyond the 48 hours and PHIL 999 Dissertation, additional hours are required as appropriate, in accordance with general and department rules.

2. Complete PHIL 800 Tutorial with a grade of B or higher, typically in the second semester of enrollment.

3. Formal Philosophy Requirement: Complete PHIL 610 Symbolic Logic or PHIL 666 Rational Choice Theory with a grade of B or higher.

4. Ph.D. Distribution Requirement: Students must complete at least seven courses from the areas below. 500- and 600-level courses are listed as prerequisite options after 800-level seminars.

Metaphysics and Epistemology (two courses)

- PHIL 620 Philosophy of Natural Science
- PHIL 622 Philosophy of Social Science
- PHIL 628 Philosophy of Logic
- PHIL 630 Philosophy of Mathematics
- PHIL 638 Philosophy of Language
- PHIL 648 Theory of Knowledge
- PHIL 650 Metaphysics
- PHIL 654 Philosophy of Mind

5. Topics in Recent Philosophy: _____ (Prerequisite: an appropriate 500- or 600-level course)

6. Ph.D. Distribution Requirements

Metaphysics and Epistemology

- PHIL 680 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 628 or PHIL 630)
- PHIL 866 Rational Choice Theory with a grade of B or higher.

3. Formal Philosophy Requirement: Complete PHIL 610 Symbolic Logic or PHIL 666 Rational Choice Theory with a grade of B or higher.

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- PHIL 650 Metaphysics
- PHIL 654 Philosophy of Mind

5. Topics in Recent Philosophy: _____ (Prerequisite: an appropriate 500- or 600-level course)

6. Ph.D. Distribution Requirements

Value Theory (two courses)

- PHIL 504 Philosophy of Sex and Love
- PHIL 555 Justice and Economic Systems
- PHIL 662 Aesthetics
- PHIL 668 Political Philosophy
- PHIL 670 Contemporary Ethical Theory
- PHIL 671 Feminist Theories in Ethics
- PHIL 672 History of Ethics
- PHIL 674 Philosophy of Law

It is essential for the student to consult the director of graduate studies in philosophy and a representative of the School of Law about specific courses required or recommended for this program.

For additional information, see the School of Law Catalog and the General Information chapter of this catalog, or write to the University of Kansas, Associate Dean, School of Law, Green Hall, 1535 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 3090, Lawrence, KS 66045-7590. For a detailed description, see the Guidelines and Information for Graduate Students available in the Department of Philosophy.

The Department of Philosophy and the School of Law offer a joint J.D./M.A. degree program.

Web sites for the University Theatre, www.kutheatre.com, the Lied Center of Kansas, www.lied.ku.edu, and the Department of Music and Dance, www.arts.ku.edu/musicdance, have information about upcoming performances and recitals.
PHIL 675 Medical Ethics: Life and Death Issues
PHIL 677 Medical Ethics: Professional Responsibilities
PHIL 850 Topics in Recent Philosophy: _____ (Prerequisite: an appropriate 500- or 600-level course)
PHIL 880 Topics in Ethics: _____ (Prerequisite: PHIL 670 or PHIL 672)
PHIL 884 Topics in Social and Political Philosophy: _____ (Prerequisite: PHIL 555 or PHIL 666 or PHIL 668 or PHIL 674)
PHIL 886 Topics in Applied Ethics: _____ (Prerequisite: PHIL 670 or PHIL 672 or an appropriate 500- or 600-level course)

Ancient Philosophy (one course)
PHIL 508 Early Greek Philosophy
PHIL 605 The Philosophy of Plato (Prerequisite: PHIL 288)
PHIL 607 The Philosophy of Aristotle (Prerequisite: PHIL 288)
PHIL 608 Hellenistic Philosophy
PHIL 805 Advanced Studies in Plato (Prerequisite: PHIL 508 or PHIL 605 or PHIL 607 or PHIL 608 or PHIL 648 or PHIL 650)
PHIL 807 Aristotle (Prerequisite: PHIL 508 or PHIL 607 or PHIL 608 or PHIL 648 or PHIL 650)
PHIL 820 Topics in the History of Philosophy: _____ (Prerequisite: an appropriate 500- or 600-level course)

Modern Philosophy (one course)
PHIL 820 Topics in the History of Philosophy: _____ (Prerequisite: an appropriate 500- or 600-level course)
PHIL 824 Hume (Prerequisite: PHIL 648 or PHIL 650 or PHIL 654)
PHIL 828 Kant (Prerequisite: PHIL 648 or PHIL 650 or PHIL 654)

19th- and 20th-century Philosophy (one course)
PHIL 560 Nineteenth-century Philosophy
PHIL 562 Kierkegaard
PHIL 570 Nietzsche
PHIL 580 Marxism
PHIL 582 Existentialism
PHIL 590 Phenomenology
PHIL 592 Contemporary Continental Philosophy
PHIL 820 Topics in the History of Philosophy: _____ (Prerequisite: an appropriate 500- or 600-level course)
PHIL 831 Hegel (Prerequisite: PHIL 560 or an appropriate 500- or 600-level course)
PHIL 835 Frege (Prerequisite: PHIL 628 or PHIL 630 or PHIL 638)
PHIL 843 Heidegger (PHIL 560 or PHIL 562 or PHIL 570 or PHIL 582 or PHIL 592)
PHIL 845 Wittgenstein (Prerequisite: PHIL 628 or PHIL 630 or PHIL 635 or PHIL 654)
PHIL 850 Topics in Recent Philosophy: _____ (Prerequisite: an appropriate 500- or 600-level course)
PHIL 852 Quine (PHIL 620 or PHIL 628 or PHIL 638)
PHIL 855 Davidson (PHIL 638 or PHIL 654 or PHIL 666)
PHIL 890 Topics in Continental Philosophy: _____ (Prerequisite: an appropriate 500- or 600-level course)

5. PHIL 901 Ph.D. 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 (FLORS) by completion of PHIL 800 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.

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.

The department’s requirement of 48 credit hours of acceptable graduate work for the Ph.D. can be reduced by petition depending on the amount and quality of equivalent graduate work completed at another institution. A student may petition the graduate faculty for a reduction (after consultation with the director of graduate studies) during the first year in the graduate program. The student must satisfy the faculty as to the quality of the petitioned course work. However, at least 24 hours of acceptable graduate work must be taken in the Department of Philosophy at KU.

Philosophy Courses
PHIL 500 Studies in Philosophy: _____ (1-6).
PHIL 504 Philosophy of Sex and Love (3).
PHIL 506 Chinese Thought (3).
PHIL 508 Early Greek Philosophy (3).
PHIL 555 Justice and Economic Systems (3).
PHIL 560 Nineteenth-century Philosophy (3).
PHIL 562 Kierkegaard (3).
PHIL 570 Nietzsche (3).
PHIL 580 Marxism (3).
PHIL 582 Existentialism (3).
PHIL 590 Phenomenology (3).
PHIL 592 Contemporary Continental Philosophy (3).
PHIL 600 Readings in Philosophy: _____ (1-6).
PHIL 605 The Philosophy of Plato (3).
PHIL 607 The Philosophy of Aristotle (3).
PHIL 608 Hellenistic Philosophy (3).
PHIL 610 Symbolic Logic (3).
PHIL 611 Topics in Symbolic Logic: _____ (1-3).
PHIL 620 Philosophy of Natural Science (3).
PHIL 622 Philosophy of Social Science (3).
PHIL 628 Philosophy of Logic (3).
PHIL 630 Philosophy of Mathematics (3).
PHIL 638 Philosophy of Language (3).
PHIL 648 Theory of Knowledge (3).
PHIL 650 Metaphysics (3).
PHIL 654 Philosophy of Mind (3).
PHIL 662 Aesthetics (3).
PHIL 666 Rational Choice Theory (3).
PHIL 668 Political Philosophy (3).
PHIL 670 Contemporary Ethical Theory (3).
PHIL 671 Feminist Theories in Ethics (3).
PHIL 672 History of Ethics (3).
PHIL 674 Philosophy of Law (3).
PHIL 676 Medical Ethics: Life and Death Issues (3).
PHIL 677 Medical Ethics: Professional Responsibilities (3).
PHIL 684 Main Currents of Russian Thought I (3).
PHIL 686 Main Currents of Russian Thought II (3).
PHIL 800 Tutorial (3). Intensive supervised training in the techniques of research. Required of every graduate student seeking an advanced degree in the first or second semester of enrollment. Passing this tutorial constitutes partial fulfillment of the Ph.D. FLORS requirements. Consent of instructor required for repeating the course. Prerequisite: Graduate standing, BSH
PHIL 805 Advanced Studies in Plato (3). Prerequisite: PHIL 508 or PHIL 605 or PHIL 607 or PHIL 608 or PHIL 648 or PHIL 650. LEC
PHIL 807 Aristotle (3). Prerequisite: PHIL 508 or PHIL 615 or PHIL 670 or PHIL 685 or PHIL 686 or PHIL 687 or PHIL 700. LEC

PHIL 820 Topics in the History of Philosophy: (1-3). 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 Schedule of Classes. Prerequisite: 500-600 level course specified as appropriate. LEC

PHIL 824 Hume (3). Prerequisite: PHIL 648 or PHIL 650 or PHIL 654. LEC

PHIL 828 Kant (3). Prerequisite: PHIL 648 or PHIL 650 or PHIL 654. LEC

PHIL 831 Hegel (3). Prerequisite: PHIL 560 or 500-600 level course specified as appropriate. LEC

PHIL 835 Frege (3). Gottlob Frege was the founder of the analytic movement in philosophy, he done work in logic and the philosophy of language. This course will focus on his primary texts as well as his influence on present-day studies. Prerequisite: PHIL 625 or PHIL 630 or PHIL 638. 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 850 Topics in Recent Philosophy: (1-3). 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 Schedule of Classes. 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: (1-3). This course may be offered under different subtitles, and may be taken more than once if the subject matter varies sufficiently. Topic and instructor and specific prerequisite to be announced in the Schedule of Classes. Prerequisite: PHIL 620 or PHIL 622 or PHIL 648 or PHIL 650 or PHIL 654. LEC

PHIL 862 Topics in Logic: (3). This course may be offered under different subtitles, and may be taken more than once if the subject matter varies sufficiently. Topic and instructor and specific prerequisite to be announced in the Schedule of Classes. Prerequisite: PHIL 610 or PHIL 628 or PHIL 654. LEC

PHIL 868 Topics in Philosophy of Language: (1-3). This course may be offered under different subtitles, and may be taken more than once if the subject matter varies sufficiently. Topic and instructor and specific prerequisite to be announced in the Schedule of Classes. Prerequisite: PHIL 628 or PHIL 638 or PHIL 654. LEC

PHIL 870 Topics in Metaphysics: (1-3). This course may be offered under different subtitles, and may be taken more than once if the subject matter varies sufficiently. Topic and instructor and specific prerequisite to be announced in the Schedule of Classes. Prerequisite: PHIL 620 or PHIL 630 or PHIL 648 or PHIL 650 or PHIL 654. LEC

PHIL 872 Topics in Theory of Knowledge: (1-3). This course may be offered under different subtitles, and may be taken more than once if the subject matter varies sufficiently. Topic and instructor and specific prerequisite to be announced in the Schedule of Classes. Prerequisite: PHIL 610 or PHIL 628 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 and instructor and specific prerequisite to be announced in the Schedule of Classes. Prerequisite: PHIL 638 or PHIL 650 or PHIL 654. LEC

PHIL 880 Topics in Ethics: (1-3). This course may be offered under different subtitles, and may be taken more than once if the subject matter varies sufficiently. Topic and Instructor and specific prerequisite to be announced in the Schedule of Classes. Prerequisite: PHIL 670 or PHIL 672. LEC

PHIL 884 Topics in Social and Political Philosophy: (1-3). This course may be offered under different subtitles, and may be taken more than once if the subject matter varies sufficiently. Topic and instructor and specific prerequisite to be announced in the Schedule of Classes. Prerequisite: PHIL 555 or PHIL 666 or PHIL 668 or PHIL 674. LEC

PHIL 886 Topics in Applied Ethics: (1-3). This course may be offered under different subtitles, such as professional ethics or some issue in business ethics (e.g., corporate responsibility or in medical ethics (e.g., the definition of death); it may be taken more than once if the subject matter varies sufficiently. Topic and instructor and specific prerequisite to be announced in the Schedule of Classes. Prerequisite: PHIL 620 or PHIL 622 or PHIL 648 or PHIL 650 or PHIL 654. LEC

PHIL 888 Topics in the Philosophy of the Social Sciences: (1-3). This course may be offered under different subtitles, such as philosophy of a particular social science (e.g., economics, psychology) or a particular issue in the social sciences (e.g., ideology, reductionism), and may be taken more than once if the subject matter varies sufficiently. Topic and instructor and specific prerequisite to be announced in the Schedule of Classes. Prerequisite: PHIL 620 or PHIL 622 or PHIL 648 or PHIL 666 or PHIL 668. LEC

PHIL 890 Topics in Continental Philosophy: (1-3). This course may be offered under different subtitles, and may be taken more than once if the subject matter varies sufficiently. Topic, Instructor, and specific prerequisites to be announced in the Schedule of Classes. LEC

PHIL 899 Master’s Thesis (1-6). Six hours of credit will be awarded upon completion of the master’s thesis, but no more than six hours of credit may be obtained in this course altogether. THE

PHIL 900 Research in Philosophy: (1-3). Intensive research in philosophy. This course will 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. THE

Physics and Astronomy

Chair: Stephen J. Sanders
Associate Chair: Philip Baringer
Malott Hall, 1251 Wescoe Hall Dr., Room 1082
Lawrence, KS 66045-7582, www.physics.ku.edu, (785) 864-4626
Graduate Adviser: Hume Feldman, 3083 Malott Hall, (785) 864-4740
Professors: Ammar, Anthony-Twarog, Baringer, Bean, Besson, Cravens, Davis, Han, Melott, Ralston, Sanders, Shandarin, Shaw, Twarog, Wu
Professors Emeriti: Armstrong, Bearse, Culvahouse, Davidson, Eagleman, Friauf, Goldhammer, Krone, Kwak, McKay, Munczek, Prosser, Sapp, Wiseman, Wong
Associate Professors: Antonik, Feldman, Medvedev, Shi, Wilson, Zhao
Assistant Professors: Fischer, Marfatia, Murray, Timm
Adjunct Assistant Professors: Ashman, Farrar, Laird

Admission

Ordinarily, admission requires an undergraduate grade-point average of at least B (3.0 on a 4.0 scale), overall and in the major. A baccalaureate degree with a major in physics is desirable but not required. Recommended preparation consists of courses in mechanics, electromagnetic theory, thermal physics, introductory quantum mechanics, advanced laboratory, and at least one course in mathematics beyond differential equations. Working knowledge of computers and of an advanced programming language is helpful. A student with less than the recommended preparation may enroll in these courses for graduate credit.

Submit your application online at www.graduate.ku.edu/GAPC.

Send transcripts of all completed college and university course work to

The University of Kansas
Graduate Application Processing Center
Strong Hall, 1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

Send all other requested application materials to

The University of Kansas
Graduate Secretary, Department of Physics and Astronomy
Malott Hall, 1251 Wescoe Hall Dr., Room 1082
Lawrence, KS 66045-7582

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
A minimum of 2 hours in PHSX 899 Master’s Research/Thesis is required, with a maximum of 6 hours that count toward the master’s degree. A candidate who has not had an advanced undergraduate laboratory course (junior/senior level) must take one of the three advanced laboratory courses offered in the department.

Undergraduate certification: Certification of knowledge of undergraduate physics normally must be completed within 12 months of entering the M.S. program, in addition to the required course work. Extension is possible with recommendation of the graduate admission committee. Certification can be achieved in several ways: (1) a scaled GRE Physics score greater than or equal to 600; or (2) determination by the graduate director and student's undergraduate record, that the student understands all major elements of undergraduate physics; or (3) successful completion with grade of B or higher of all undergraduate courses that the graduate director or adviser recommends based on the results of (2). A student who has not succeeded in certifying undergraduate physics knowledge could, within 12 months of starting the program, petition the graduate committee for an oral examination on undergraduate physics. The oral examination is administered by a committee of six faculty members assigned by the department.

Communication Skills: All graduate students must deliver at least one oral presentation per semester, with at least two faculty members or their professional equivalents present.

Candidates must pass a general oral examination in physics. The examination is given shortly before completion of other work for the degree. A master’s thesis is not required but may be submitted if the candidate and the director of the candidate’s research believe it to be appropriate.

M.S. 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)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHSX 815 Computational Methods in Physical Sciences/ASTR 815 Computational Physics and Astronomy</td>
<td>3</td>
</tr>
<tr>
<td>PHSX 718 Mathematical Methods in Physical Sciences</td>
<td>3</td>
</tr>
<tr>
<td>MATH 781/EECS 781 Numerical Analysis I</td>
<td>3</td>
</tr>
<tr>
<td>EECS (one course at the 300 level or above in addition to EECS 781)</td>
<td>3</td>
</tr>
</tbody>
</table>

Note: Courses below the 500 level do not count toward the required 30 hours of graduate credit.

One additional PHSX/ASTR/ATMO course at the 500 level or above: 3

PHSX 899 Master’s Research/Thesis: 6

B. Twelve or more credit hours from the following list: 12

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EECS 360 Signal and System Analysis</td>
<td>3</td>
</tr>
<tr>
<td>*EECS 368 Functional Programming</td>
<td>3</td>
</tr>
<tr>
<td>*EECS 388 Computer Systems and Assembly Language</td>
<td>4</td>
</tr>
</tbody>
</table>

*EECS 448 Software Engineering I (3)

Courses below the 300 level do not count toward the required 30 hours of graduate credit.

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 611 Time Series Analysis (3)

MATH 627 Probability (3)

MATH 647 Applied Partial Differential Equations (3)

MATH 782/EECS 782 Numerical Analysis II (3)

MATH 783 Applied Numerical Methods for Partial Differential Equations (3)

PHSX/ASTR/ATMO courses numbered 500 or above (3)

C. Thesis. An important component of this degree is the completion and documentation of a successful computer project. A thesis must be presented that describes the basic physics involved in the project, the method of implementing the project, and a discussion of the results. An oral defense of the thesis is required before a committee of at least three members of the graduate faculty.

M.S. Emphasis in Geophysics. This program is for students who wish to emphasize geophysics in terms of either solid earth or fluids. Students should have a degree in physics or another physical science or engineering, with a strong physics and mathematics background. Candidates must complete a minimum of 30 credit hours of advanced lecture courses, numbered 500 or above, in physics and related subjects. These must include the following:

Four courses chosen from the following: 12

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOL 512 Igneous and Metamorphic Petrology</td>
<td>3</td>
</tr>
<tr>
<td>GEOL 552 Introduction to Hydrogeology</td>
<td>3</td>
</tr>
<tr>
<td>GEOL 562 Structural Geology</td>
<td>4</td>
</tr>
<tr>
<td>GEOL 577 Environmental Geophysics</td>
<td>3</td>
</tr>
</tbody>
</table>

PHSX 528/GEOL 573 Geodynamics and Plate Tectonics (3)

ATMO 660 Advanced Dynamic Meteorology (3)

PHSX 795 Space Plasma Physics (3)

ATMO 642 Remote Sensing (3)

ATMO 650 Advanced Synoptic Meteorology (3)

Each of the following courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHSX 815 Computational Methods in Physical Sciences (3)</td>
<td></td>
</tr>
<tr>
<td>PHSX 623 Physics of Fluids</td>
<td>3</td>
</tr>
<tr>
<td>PHSX 899 Master's Research/Thesis</td>
<td>2-6</td>
</tr>
</tbody>
</table>

Electives (minimum of 10 hours at the 700 level or above that must include at least one of the following): 10

PHSX 815 Computational Methods in Physical Sciences (3)

PHSX 722/GEOL 772 Geophysical Data Analysis (3)

PHSX 723/GEOL 773 Seismology (3)

PHSX 724 Potential Fields in Geophysics (3)

PHSX 727/GEOL 771 Advanced Geophysics: (3)

The student must write a research/thesis proposal and orally defend it before a committee of three faculty members, at least one of whom is from a department other than physics and astronomy. The student also must orally defend the completed master’s research/thesis project before this committee.

Ph.D. Degree Requirements

Residence. The student must spend the equivalent of three full academic years in graduate study at this or another approved institution or laboratory. Graduate students with half-time assistantships usually require at least four years to complete all requirements. Maximum enrollment for students with no other departmental obligations is 16 hours a semester. In addition to satisfying the residence requirement, a student with a half-time assistantship must be enrolled for at least 6 hours each semester. A maximum of 12 hours is permitted if the student’s duties consist of research that partially

Faculty and students in nuclear physics are studying the collisions of relativistic heavy-ions in data obtained from the RHIC collider facility, using detectors designed and constructed on campus.

KU particle physicists are looking for new phenomena at the world’s highest energy accelerators: Fermilab’s currently operating proton-antiproton collider, CERN’s soon-to-be-completed Large Hadron Collider, and the proposed next-generation electron-positron linear collider.
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 department requirements:

1. Undergraduate knowledge of physics must be certified by the department at the advanced undergraduate level (600-level KU courses). This normally must be completed within 12 months of entering the program, in addition to required course work. Extension is possible with recommendation of the graduate administration committee. The certification can be achieved in several ways: (a) a scaled GRE Physics score greater than or equal to 600; or (b) determination by the graduate director and graduate adviser, based on the diagnostic examination given on entering the program combined with the student’s undergraduate record, that the student understands all major elements of undergraduate physics; or (c) successful completion with grade of B or better of all undergraduate courses that the graduate director or adviser recommends based on the results of (b). A student who has not succeeded in certifying undergraduate physics knowledge could, within 12 months of starting the program, petition the graduate committee for an oral examination on undergraduate physics. The oral examination is administered by a committee of six faculty members assigned by the department.

2. A minimum grade-point average of 3.2 must be achieved in core courses. It is computed from the following five equally weighted elements:
   - Grade obtained in PHSX 711 Quantum Mechanics I
   - Grade obtained in PHSX 811 Quantum Mechanics II
   - Grade obtained in PHSX 821 Classical Mechanics
   - Grade obtained in PHSX 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 student’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 716 Mathematical Methods in Physical Sciences
   - PHSX 815 Computational Methods in Physical Sciences (satisfies FLORS requirement)
   - PHSX 871 Statistical Physics I
   - PHSX 931 Electrodynamics II

3. **Two additional PHSX lecture courses numbered 700 or above.** The courses must be in different subfields of physics. They may not be chosen 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 three advanced laboratory courses. Other experimental work (e.g., senior thesis or undergraduate research) may be considered for this requirement.

- PHSX 516 Physical Measurements
- PHSX 536 Electronic Circuit Measurement and Design
- PHSX 601 Design of Physical and Electronic Systems

The student and the adviser select subsequent work, consisting of advanced courses in appropriate fields and seminars, based on the student’s need and intended specialization. There is no prescribed total number of credit hours. The student’s dissertation committee determines the adequacy of courses and seminars and specifies total course requirements.

**Colloquium and Graduate Seminar.** All students must enroll in PHSX 700 Colloquium in the sixth semester. Students should have attended at least 75 percent of the regularly scheduled colloquium during the six semesters to achieve a passing grade. One semester of the first year, students are expected to attend the graduate seminar to become familiar with research programs and to gain experience in oral presentations.

**Computing Skill.** Students must complete PHSX 815 Computational Methods in Physical Sciences/ASTR 815 Computational Physics and Astronomy with a grade of A or B, preferably within one year after admission to preliminary candidacy. This course has significant prerequisites in advanced undergraduate computer science and requires completion of a substantial computer program to solve a physical problem.

**Comprehensive Examination.** After completing a major portion of the required course work and satisfying the computing skill requirement, the student must pass the comprehensive examination. The department recommends five members for the examining committee to Graduate Studies. One member must be from outside the department. Requests to take the exam must be made at least three weeks before the examination. The student writes a 2,000- to 4,000-word paper relevant to thesis work. The paper must be presented at least one week before the scheduled oral examination. The student is examined on the oral presentation, the contents of the paper, the bibliography, the general field of physics, and other related material. The student must receive passing grades on both the written and oral examinations.

**Research and Post-comprehensive Enrollment.** Upon passing the comprehensive oral examination, the aspirant becomes a candidate for the Ph.D. Graduate Studies designates the candidate’s dissertation committee, based on department recommendations. The committee establishes course requirements and designs 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
The space physics group has experiments on the Cassini mission to Saturn and Titan, models planetary magnetospheres and their interaction with space plasmas, and explores the physics of gamma ray bursts.

Condensed-matter physicists at KU are exploring quantum devices that could be used as qubits in quantum computers, machines that could be orders of magnitude faster than current computers.
Physics & Astronomy • Political Science

nancies of macromolecular interactions and quantitative methods of data analysis. Basic electrodynamics and relativistic electrodynamics will also be reviewed. Prerequisite: PHYS 212, MATH 122, and CHEM 188. LEC

PHSX 741 Nuclear Physics I (3). Experimental methods in nuclear physics, elementary concepts and simple considerations about nuclear forces, alpha and beta decay, gamma radiation, nuclear structure and reaction systems. Prerequisite: PHYS 741. LEC

PHSX 761 Elementary Particles I (3). Particle accelerators and detectors; quarks and leptons; invariance principles and conservation laws; strong, electromagnetic, and weak interactions of elementary particles; unification of electroweak and other interactions. Prerequisite: PHYS 711. LEC

PHSX 781 Solid State Physics I (3). Classification of solids, structure and symmetry of crystals; lattice vibrations and thermal properties of solids; electric and magnetic properties; electron theory of metals and semiconductors; electronic and atomic transport properties; theory of ionic crystals. Prerequisite: PHYS 511 (or CHEM 466) and PHYS 671 (or CHEM 664). LEC

PHSX 791 Seminar in Astrophysics (1-3). Seminar designed to cover current topics in the physics of the Universe beyond the solar system. Content will vary. Graduate students engaged in or preparing for research may repeat enrollments in this course. Open to undergraduates with twelve hours of physics/astrophysics courses numbered 300 or above, or consent of instructor. LEC

PHSX 793 Physical Cosmology (3). Discussion of how fundamental laws of physics govern the evolution of the universe as a whole along with its structure. Survey of cosmological models and the observed cosmic background radiation and evidence for dark matter. Development of the universe, including theories of initial conditions; cosmological phase transitions; generation of possible relics and dark matter; symmetry breaking; baryon asymmetry; nuclear synthesis; recombination; gravitational instability and the formation of structure; current experimental techniques. Prerequisite: PHYS 718. Recommended: PHYS 393. LEC

PHSX 795 Space Plasma Physics (3). The physics of fully ionized gases in magnetic fields and their application to interplanetary processes, planetary radiation belts, and the interstellar medium. Motion of charged particles in magnetic fields, magnetohydrodynamic waves, the solar wind, the ionosphere, and the magnetosphere. (Same as ASTR 795.) Prerequisite: PHYS 621. Corequisite: PHYS 631. LEC

PHSX 800 Graduate Problems (1-5). Advanced laboratory problems, special research problems, or reading problems. Repeated enrollments are permitted. RSH

PHSX 801 Advanced Topics (1-3). Lectures on advanced material not covered by regular courses. The topics are not limited but generally address recent experimental or theoretical developments in subjects such as superconductor, nuclear physics, elementary particle physics, quantum field theory, gauge and unified theories, nonlinear or chaotic systems, space plasma physics, and astrophysics and cosmology. Repeated enrollments are permitted. LEC

PHSX 811 Quantum Mechanics III (3). Time dependent perturbation theory. Gauge invariance and electromagnetic interactions. Quantization of the electromagnetic field and applications. The Dirac equation, its transformation properties and applications to relativistic problems. Scattering theory, elementary applications, and formal properties. Prerequisite: PHYS 711. LEC

PHSX 815 Computational Methods in Physical Sciences (3). Advanced computer applications in physical sciences. 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 CHEM 911.) Prerequisite: Six hours of computer science courses numbered 300 or above, and six hours of physics and/or astronomy courses numbered 300 or above. LEC

PHSX 817 Graduate Seminar (1). First year graduate students meet to survey requirements for degree. LEC

PHSX 821 Classical Mechanics (3). Vector and tensor notation; review of Newtonian mechanics; Lagrangian mechanics; linear vector spaces and matrix theory with applications to the theory of small oscillations; rigid bodies; Hamiltonian formalism. Special relativity. Prerequisite: Twelve hours of junior-senior courses in physics. LEC

PHSX 831 Electrodynamics I (3). Electrostatics and magnetostatics; Maxwell’s equations; plane waves; waveguides. Prerequisite: PHYS 718 and PHYS 821. LEC

PHSX 841 Nuclear Physics II (3). Nuclear forces and the two-body problem; nuclear models; phenomenological treatment of nuclear reactions and decay processes. Prerequisite: PHYS 741 and PHYS 811 LEC

PHSX 861 Elementary Particles II (3). Theoretical analysis of the standard model of strong and weak interactions. Applications of decays and scattering processes with comparison to experiments. Selected topics in non-perturbative physics. Examples of tests to probe beyond the standard model. Prerequisite: PHYS 761. Corequisite: PHYS 911. LEC

PHSX 871 Statistical Physics I (3). Review of and advanced topics in thermodynamics; the Maxwell relations; the third law; phase transitions. Kinetic theory: the Boltzmann equation; transport phenomena. Statistical mechanics of ideal Maxwell-Boltzmann, Bose-Einstein, Dirac and Bose-Einstein gases; ensemble theory; derivation of the laws of thermodynamics. Prerequisite: PHYS 711 and PHYS 821. PHYS 671 is recommended. LEC

PHSX 881 Solid State Physics II (3). More advanced topics in solid state physics that include: dielectric magnetism, ferromagnetism, antiferromagnetism; electron and nuclear spin magnetic resonance; dielectric properties and ferroelectricity; photocconductivity and luminescence. Prerequisite: PHYS 631 and PHYS 711 (or CHEM 646) LEC

PHSX 899 Plasma Physics (3). Magnetohydrodynamics, including discussion of shocks, waves, and stability theory; statistical mechanical foundations; kinetic theory; microinstability; non-linear phenomena. Prerequisite: PHYS 795. LEC

PHSX 897 Seminar in Plasma and Space Physics (1-3). Graduate students engaged in or preparing for research may repeat enrollments in this course. The content will vary. Prerequisite: PHYS 899. LEC

PHSX 915 Relativity (3). Reviews of special relativity, manifolds, tensors, and geometry. General coordinate covariance and general relativity. Applications to classical theory of gravitation: weak field tests, isotropic, homogeneous cosmology, Schwarzschild solution. Selected advanced topics. Prerequisite: A total of 10 hours of junior/senior work in physics and mathematics, including at least concurrent enrollment in MATH 646. LEC

PHSX 971 Seminar in Theoretical Physics (1-3). Graduate students engaged in or preparing for research may repeat enrollments in this course. Content will vary. LEC

PHSX 973 Electrodynamic Fields (3). Qualitative and quantitative aspects of electromagnetic and gravitation: weak field tests, isotropic, homogeneous cosmology, Schwarzschild solution. Selected advanced topics. Prerequisite: A total of 10 hours of junior/senior work in physics and mathematics, including at least concurrent enrollment in MATH 646. LEC

PHSX 997 Seminar in Solid State Physics (1-3). Graduate students engaged in or preparing for research may repeat enrollments in this course. Content will vary. LEC

PHSX 999 Ph.D. Dissertation Research (1-10). Research work (either experimental or theoretical) in physics for students working toward the Ph.D. degree. Repeated enrollments are permitted. THE

Phyiology and Cell Biology
See Biological Sciences: Molecular Biosciences.

Polish
See Slavic Languages and Literatures.

Political Science
Chair: Elaine Sharp, esharpen@ku.edu
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Lawrence, KS 66044-3177, www2.ku.edu/~kups, (785) 864-9025
Graduate Studies Director: Juliet Kaarbo, kaarbo@ku.edu, 520 Blake Hall, (785) 864-9043
Professors: Cigler, D’Anieri, Francisco, Heike, Johnson, Loomis, Schrod, Schumaker, Sharp
Professors Emeriti: Drury, Heller, Nehring, Piekalkiewicz, Tomasek
Associate Professors: Britton, Haider-Markel, Herron, Joslyn, Kaarbo, O’Brien, Reich, Yap
Assistant Professors: Berjarano, Daley, Doan, Kennedy, Lynch, Omelicheva, Steele, Weaver
The department offers M.A. and Ph.D. degrees for students interested in academic work in political science leading to teaching and research careers. Political science graduates also have found careers in the public, private, and not-for-profit sectors. Ph.D. students can pursue concentrations in U.S. politics, comparative politics, international relations, political theory, and public policy.

Admission
Admission to M.A. or Ph.D. programs is based on the applicant’s undergraduate and/or graduate record, standardized test scores, and references from instructors. All applicants must complete a bachelor’s degree. A completed application must in-
Political science doctoral graduates have found teaching and professional careers at Oklahoma State University, the University of California–Irvine, the University of Melbourne–Australia, SUNY–Baruch College, National Defense College, and Cleveland State University.

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.
Political Science

mental 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 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 565 Political Change in Asia** (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 618 The Presidency** (3).
**POLS 619 Topics in American Politics:_____** (1-3).
**POLS 620 Formulation of Public Policy** (3).
**POLS 621 Public Policy Analysis** (3).
**POLS 622 Government and the Economy** (3).
**POLS 623 The Politics of Social Policy** (3).
**POLS 624 Environmental Politics and Policy** (3).
**POLS 625 Extremist Groups and Government Response** (3).
**POLS 626 Introduction to Survey Research** (3).
**POLS 627 Advanced Issues in Survey Research** (3).
**POLS 629 Topics in Public Policy:_____** (1-3).
**POLS 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 645 Corruption, Crisis, and Scandal** (3).
**POLS 650 Palestinians and Israelis** (3).
**POLS 651 Women and Politics in Latin America** (3).
**POLS 652 Politics in Western Europe** (3).
**POLS 653 Gender, War, and Peace** (3).
**POLS 654 Politics and Government of Russia and the Central Eurasian States** (3).
**POLS 655 Politics of East-Central Europe** (3).
**POLS 656 Governments and Politics of East Asia** (3).
**POLS 657 Government and Politics of Southeast Asia** (3).
**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).
**POLS 661 Politics of the Middle East** (3).
**POLS 663 Protest and Revolution** (3).
**POLS 664 Middle East Politics, Honors** (3).
**POLS 665 Politics in Africa** (3).
**POLS 666 Political Economy of East Asia** (3).
**POLS 667 Islam and Politics** (3).
**POLS 668 Reform in Contemporary China** (3).
**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 674 International Ethics** (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. Policy—Post-colonial World** (3).
**POLS 683 International Mediation, Honors** (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 activities engaged in by political theorists. Thus the course focuses on several approaches to doing political theory, such as interpreting the work of great political philosophers, clarifying political concepts, organizing and integrating political ideas, evaluating political practices, and creating new political perspectives. The course will focus on historical and contemporary treatments of both epistemological issues (the possibility and grounds for political knowledge) and selected substantitive issues (e.g., the legitimacy of the state, the merits and limitations of democracy, the requirements of justice, and the nature and importance of ideologies). LEC.
**POLS 702 Empirical Political Theories** (3). The purpose of this course is to aid students in the critical evaluation and construction of empirical political theory. It will (a) introduce students to various types of political 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 of empirical 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 political economic approach to individual and collective choice behavior called "rational choice." The course focuses on models of voting systems and other political institutions as seen from a game theoretic perspective. Prerequisite: Nine hours of political science or 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 consent of instructor. LEC
**POLS 706 Research Methods I** (3). An introduction to quantitative research 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 techniques for multivariate analysis, focusing on multiple regression. Topics include interpolation of regression statistics, diagnostics for common problems, dummy variables, instrumental variables, basic time series methods including adjustment for autocorrelated error, logistic models, and nonlinear modeling; additional techniques may be covered at the discretion of the instructor. Prerequisite: POLS 706. LEC.
**POLS 708 Advanced Qualitative Research Methods** (3). An examination of qualitative research approaches frequently employed within political science. Topics may include 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 culturalist approaches, historical institutionalism, rational choice, and constructivism. Prerequisite: POLS 705 and either graduate standing or consent of instructor. LEC.
**POLS 709 Topics in Political Theory:_____** (3). At the discretion of the instructor, this course will select one or more important areas of political theory for in-depth analysis. Prerequisite: Six hours in Political Theory. RSH.
**POLS 711 The Psychological Base of Political Behavior** (3). Examination of the relations between psychological mechanisms and social milieu factors and individual political behavior. Particular attention is devoted to understanding the development of political predispositions, psychological traits and dispositions, and to the methodology employed in studying the socio-psychological factors which underlie individual political behavior. Prerequisite: Twelve hours of political science and consent of instructor. LEC.
**POLS 712 The Electoral Process** (3). A study of the characteristics of voting behavior and the influences upon such behavior in the United States. Emphasis is placed upon relevant research findings concerning participation and apportionment in politics, and on the methodology employed in the study of political behavior. Prerequisite: Twelve hours of political science and consent of instructor. LEC.

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POLS 713 Law and Society (3). A study of the province and function of law in the context of relations of economic, social, and political factors on the law will be illustrated through readings 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. LEC

POLS 715 Political Communication (3). A seminar for students interested in the role of communication in politics. In particular, this seminar will examine the functioning and role of the media and the formation of public opinion. Prerequisite: Graduate standing or consent of instructor. 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-legal participation. Prerequisite: Graduate standing or consent of instructor. LEC

POLS 719 Topics in the American Political Institutions: ____ (3). A seminar to be offered as occasion demands, dealing with, but not limited to special topics in the presidency, congress, and judicial processes. Prerequisite: Graduate standing or consent of instructor. LEC

POLS 720 The Scope of Public Policy (3). Introductory graduate course in the examination of public policy making. Considers institutions, basic theoretical frameworks, and standard methods, and places policy-making within a broad political context. Emphasizes American examples, but relevant comparative material is employed. Prerequisite: Twelve hours of political science. LEC

POLS 722 Intergovernmental Relations (3). A survey of characteristic legal, political, and administrative relationships among different units 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 seminar examines the application of policy theory in regional and comparative contexts. Much of the research examined focuses on comparative public policy, but select weeks focus on specific regional and international issues. A key objective in this seminar is to help students understand which theories of policy may be best suited for universal application. LEC

POLS 730 Politics of Ideocracy (3). Study of ideologically-based authoritarian political systems and movements, especially communist and fascist systems and their policies and problems. Comparison of Fascist Italy, Nazi Germany, the Soviet Union, Eastern Europe, China, Cuba, and developing nations. Prerequisite: Six hours in the social sciences 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 problems of transforming a centralized planned economy into a free market economy in a context of ethnic and national tensions, economic decay, and cultural factors. Prerequisite: Eight hours in the social sciences and/or history, including POLS 150, or consent of instructor. LEC

POLS 755 Politics of East-Central Europe (3). This course analyzes Communist political theory in its application to the countries of East-Central Europe, the former Soviet Union, and the development of national political systems. Emphasis will be given to the examination of their historical backgrounds and their patterns of political, social, and economic development. It constructs a theoretical model of the communist state and its political ideology. Prerequisite: Six hours in the social sciences and/or history, including POLS 150, or consent of instructor. LEC

POLS 758 Revolutionary Politics of Latin America (3). Primarily a comparative analysis of the Mexican, Bolivian, and Cuban revolts within a framework of revolution as a theoretical concept. Special attention is given to revolutionary political groupings and conditions in the Latin American countries. Prerequisite: POLS 150 or consent of instructor. LEC

POLS 760 The Politics and Problems of Developing Countries (3). A focus on topics pertinent to all of the underdeveloped areas of the world in the role of the military, styles of political leadership, land tenure systems, 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 653, POLS 654, POLS 655, POLS 656, POLS 657, POLS 658, POLS 659, POLS 753, POLS 754, POLS 755, 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 regulations, 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 POLS 150 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 and/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 roles of major world powers. Prerequisite: POLS 170 or a relevant course on 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 regard to the interpretation of law and policy analysis, 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: ____ (2-3). A study of selected problems in international relations. Prerequisite: Consent of instructor. RSH

POLS 810 Advanced Policy Analysis (3). A survey and critical examination of current 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 purpose is to enable students to 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 constructed from research questions and programs, and the way theories are implemented. LEC

POLS 820 Policy Formulation and Adoption (3). Survey of the literature in the institutional, socio-economic, 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 policy formulation and implementation. 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 formulation and implementation of public policy, 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 administration in each stage of the policy formulation and implementation. Evaluation of 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 and 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 debates; competing paradigms which have characterized Comparative Politics (structural-functionalism, culturalists, stat-centrists, institutionalists, rational choice, and other); theory building and the role of area studies. LEC

Fifteen KU students have received Truman Scholarships, for outstanding potential for leadership in government, since the award was established in 1976.

All international students who are not native speakers of English must be screened by the Applied English Center in Lippincott Hall on arrival at KU.

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POL 851 Comparative Institutions and Government (3). This course provides a survey of the comparative institutional traditions of 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

POL 852 Comparative Political Economy (3). This course provides a survey of some of the major works, research traditions, and current debates in the subfield of comparative political economy. This includes such topics as: the political economy of development and underdevelopment; dependency and world systems theory; the relationship between economic development and democracy; capitalist development and democracy; the political economy of dual transitions; the political economy of privatization and structural adjustment; comparative welfare states; and comparative labor market transitions. Prerequisite: POLS 850. LEC

POL 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 representation; and the political economy of state-society relations; and religion and politics. Prerequisite: POLS 850. LEC

POL 870 International Relations (3). Critical evaluation of the major approaches to international relations and their application to conflict and conflict resolution, foreign policy, and institutional political economy. LEC

POL 898 Nonthesis 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

POL 899 Thesis (1-6). Enrollment for writing thesis for master’s degree. THE

POL 905 Complex Adaptive Systems, Agent-based Modeling, and Computer Simulation (3). This seminar addresses the rapidly growing science of complex systems. Topics addressed include political, economic, ecological, and biological systems. Includes a survey of the theory of complexity and computer models that are used to study complex adaptive systems. The main focus is on agent-based models, but attention is given also to traditional cellular automata. Methods of designing, programming, and interpreting results of agent-based models are addressed. Prerequisite: POLS 850. LEC

POL 906 Advanced Regression (3). Covers topics appropriate for a second course in regression analysis. Topics will vary according to the interests of the instructor and students, but will generally include such topics as multiple imputation of missing data, the generalized linear model (CLM), and specialized models for longitudinal data. The course will include a review of the principles of maximum likelihood estimation and applications of matrix algebra and differential calculus in statistical applications. LEC

POL 907 Research Methods in International Studies (3). This course focuses on quantitative methods of research relevant to international relations and comparative politics. Topics will vary with the instructor and student interests, but may include time series analysis, classification algorithms, computer programming and computational modeling, simulation, event data and content analysis, and dynamic models. Prerequisite: POLS 707. LEC

POL 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

POL 909 Topics in Methodology (3). An intensive seminar in a method (or a variety of relevant methods) of theoretical or empirical research designed for PhD students only. Emphasis is on deepening the understanding and ability to use advanced methods of analysis. Prerequisite: Admission to the Ph.D. program. RSH

POL 910 Research Seminar in American Government (2-3). A faculty and advanced graduate student colloquium research experience 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

POL 911 The U.S. Congress (3). This seminar employs various theoretical and methodological perspectives to explore the burgeoning post-1960 literature on Congress. Traditional subjects such as committees, parties, and elections are examined through applications of formal models, behavioral analyses, and participant observation. LEC

POL 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

POL 913 State and Local Politics (3). Research seminar on various aspects of state and local governments, such as reformed institutions, fiscal stress, citizen participation, and various policy problems. LEC

POL 914 Political Behavior (3). Survey of various approaches to the analysis of political behavior, including an evaluation of each approach in terms of its utility in building empirically-based political theory. Examples of the application of the various approaches will focus upon the American political process. LEC

POL 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

POL 916 Group Politics (3). The focus of this course is upon the theories and research findings dealing with political groups in American politics, including policy groups. 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

POL 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

POL 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

POL 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 complete an original research project with the intention of presenting the work at a professional conference or publishing the work in a professional journal. LEC

POL 921 Public Law (3). This seminar is designed to initiate the advanced grad student research in jurisprudence and law (as distinguished from the study of law). Seminar topics include social and administrative law and the relationship between legal systems and social relations. Prerequisite: Admission to the legal studies program. LEC

POL 923 Research Seminar in International Studies (2-3). A faculty and advanced graduate student colloquium research experience focusing on comparative politics, area studies, and international relations, with faculty and students engaged in the production of scholarly research articles, books, and conference papers. Topics will be chosen by individual students with consent of the seminar professor. RSH

POL 925 International Relations (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

POL 926 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 interest within the broad framework of the seminar. LEC

POL 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

POL 955 Politics of Advanced Industrial Societies (3). Theory and research on the patterns of behavior that characterize the politics of North America, Europe, and developed regions of Asia. Topics include corporatism and alternative forms of interest intermediation, economic theories of socialization and electoral choice, and the role of the state; its finances, adaptation, and the problem of power and legitimacy. Prerequisite: POLS 850 or permission of instructor. LEC

POL 956 The Governments and Politics of Asia (2-3). A research seminar on selected subjects and issues in the governments and politics of Asian countries. The particular focus each year will depend upon the instructor. LEC

POL 957 Political Processes in Southeast Asia (3). A seminar on political leadership, parties, military regimes, and other selected topics of Southeast Asian politics. LEC

POL 999 Topics in Comparative Politics: _____ (1-3). Study of selected topics in comparative government and politics. LEC

International students in political science are eligible for the Harry S. Truman Good Neighbor Award. The award is given every year to two students interested in conflict resolution at the international level.
POL 960 Politics of Developing Countries (2-3).LEC

POL 961 The Politics of Culturally Plural Societies (3). This is an advanced graduate seminar on the comparative study of politics in societies 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 cooperation among such groups in a variety of world regions. Students will then examine the efficacy of these theories and should have the prior approval of the faculty member with whom they wish to conduct the research. RSH

POL 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. Restoration of governments in Latin America with individually assigned case studies. Prerequisite: Two upper level or graduate courses in comparative politics. LEC

POL 965 Soviet and East European Policies and Problems (3). A seminar for advanced graduate students interested in Soviet and East European politics and policies. 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 co-authored with the intention of submitting them for publication. LEC

POL 970 Foreign Policy Analysis (3). Designed to acquaint students with the principal theories, approaches, and types of empirical analysis generally employed to explain and present the 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

POL 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

POL 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 law and institutions (e.g. IMF, IBRD, UN). (Same as SOC 873.) Prerequisite: POLS 870 or consent of instructor. LEC

POL 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 inter-state 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

POL 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

POL 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

POL 977 Ethics in International Relations Theory (3). This course examines how issues of International Ethics have been treated in International Relations theory. This course begins by reviewing several theoretical perspectives of International Relations and how they have treated historical analysis of the role of ethics in International politics. By the end of the semester, students should have a firm understanding of (1) the salient issues of international ethics in world politics and (2) whether and how IR scholars have (theoretically and methodologically) placed those issues in their research paradigms. The issue areas the course will cover include, but are not limited to, human rights doctrines, issues of economic and political justice, just war theory (jus ad bellum) and just conduct of war (jus en bello), and humanitarian intervention. The course will assess the role international law has played in stemming and/or punishing human rights abuses. Students will review several historical cases of genocide, as well as several cases of truth and reconciliation commissions. LEC

POL 978 Advanced Topics in International Relations Theory (3). Intensive examination of key theoretical debates in international relations. Topics covered will include Classical Realism and Liberalism, Neorealism/Neoliberal debate, and post-structural critiques of mainstream international relations theory. Prerequisite: POLS 870. LEC

POL 979 Topics in International Relations: (3). To be offered periodically when topics of special interest arise. LEC

POL 980 International Organizations (3). Considers theoretical and empirical work on international governmental and non-governmental organizations (IGOs). Specifically highlights the evolving scholarly debates regarding the function, design, and delegation of authority to IOGs as well as their behavior and change. Explores through discussions and readings a wide range of cases, including comprehensive coverage of the United Nations, Bretton Woods Institutions, and the European Union, and their activities in issue areas concerning international security, trade, finance, development, humanitarian aid, and the environment. LEC

POL 981 International Development Policy and Economic Environment (3). Considers the nature and problems of development and underdevelopment from a cross-regional and interdisciplinary perspective. Deals with the historical origins of the enormous disparities in wealth that exist today, both between and within countries. Considers the explanations for those differences, prescriptions for how to narrow them, and specific cases (both successes and failures) from various regions of the globe. LEC

POL 993 Directed Readings (1-5). Designed to meet the needs of graduate students whose study in political science cannot be met with present course. Prerequisite: Consent of instructor. RSH

POL 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 will review several historical cases of genocide, as well as several cases of truth and reconciliation commissions. LEC

POL 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 one semester or two in combination. Graded S or F depending of the results of the comprehensive examination. RSH

POL 999 Doctoral Dissertation (1-15). Enrollment for writing doctoral dissertations. THE

Psychology

Chair: Gregory Simpson, gsimpson@ku.edu
Fraser Hall, 1415 Jayhawk Blvd., Room 426
Lawrence, KS 66045-7556, www.psych.ku.edu, (785) 864-4131

Professors: Batson, Bernstein, Biernat, Branscombe, Colombro, Crandall, Denne, Higgins, Holmes, Ingram, Juola, Kemper, Little, McCluskey-Fawcett, Muehlenhard, Roberts, Simpson, Snyder, Vernberg

Professors Emeriti: Baumgartel, Brehm, Crockett, Cromwell, Hallenbeck, Kellas, Neuringer, Rosenfeld, Shontz, Wrightsman

Associate Professors: P. Atchley, R. Atchley, Gallant, Ilardi, Jackson, Karpowitz, Schreiber, Steele

Assistant Professors: Adams, Biggs, Dier, Gillath, Greenhoot, Havley, Hamilton, Preacher, Vittevich

The department offers a single doctoral degree in psychology, which may be earned in social, cognitive, quantitative, developmental, or clinical psychology. Students enter with the expectation of earning the Ph.D. The department does not admit students seeking the terminal master’s degree. The department cooperates with related departments in joint Ph.D. programs in clinical child psychology, developmental and child psychology, and child language.

Admission

Students may write to the department for application materials or download program information and application materials from our Web site. Applicants must have earned either the bachelor’s degree or the master’s degree. Although most applicants have majored in psychology as undergraduates, this is not required. It is necessary, however, to have earned 15 credit hours in psychology, including a first course in statistics and a course in experimental psychology or psychological research methods. Admission is competitive. The Graduate Record Examination is required. The GRE subject test is preferred but not required. Prior research and relevant work experience, honors, awards, and other achievements are taken into account. The deadline for completed applications is January 15 for the following fall semester. January 4 is the deadline for students seeking university-wide fellowships or other financial assistance.

Submit your application online at www gradu at e .ku .edu/GAPC. Send transcripts of all completed college and university course work to

The University of Kansas
Graduate Application Processing Center
Strong Hall, 1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

Send all other requested application materials to

The University of Kansas
Graduate Officer, Department of Psychology
Fraser Hall, 1415 Jayhawk Blvd., Room 426
Lawrence, KS 66045-7556

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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. These plans indicate how the student proposes to fulfill the requirements for the M.A. and Ph.D. degrees, including all general requirements and conditions.

Social Psychology. The program is an intensive research training experience seeking students who are committed to empirical, scholarly work. The major research interests of faculty members include memory, cognitive development, language, perception, attention, aging, and cognition.

Recent graduates have found employment in academic programs, research organizations, and applied research units in industry and government. The rate of employment for graduates is very high. General program requirements are listed below. Applicants are encouraged to consult the department’s Web site for details.

The admission process includes evaluation of submitted materials and may include additional interviews by individual faculty members, as appropriate. The program follows a mentorship model; students are admitted to work with specific faculty members rather than to the program at large. During the application process, applicants are encouraged to contact faculty members with whom they are interested in working.

General Program Requirements (with recommended completion time)
- Research activity (continuous)
- Course requirements (before oral comprehensive examinations)
- Master’s thesis and oral defense (year two or three)
- Written preliminary examination (year three or four)
- Foreign Language or Other Research Skills (FLORS) requirement (year three or four)
- Comprehensive oral examination (year four or five)
- Dissertation and oral defense (year five or six)

Course Requirements. Statistics/Methods Core (12 hours by the end of the third year)
- PSYC 790 Statistical Methods in Psychology I
- PSYC 791 Statistical Methods in Psychology II
- PSYC 982 Issues in Scientific Conduct
- PSYC 983 Methodology

Content Core (9 hours by the end of the second year)
- PSYC 723 Advanced Cognitive Psychology
- Plus two subsequent classes in spring semester; these have previously included
  - PSYC 725 Cognitive Neuroscience
  - PSYC 737 Psycholinguistics II
  - PSYC 757 Theories of Perception
  - PSYC 831 Advanced Human Learning and Memory

Breadth/Depth (12 hours before oral comprehensives)
- Breadth I and II
- Depth I and II
- Breadth/deep courses may come from a number of sources, depending on student interests and adviser suggestions. Students are expected to use this requirement to gain additional specialization in two areas in addition to cognitive psychology. Examples include Quantitative (courses in psychology and PRE), Language (courses in linguistics or speech-language-hearing), Neuroscience (courses in psychology, biology, or pharmacology), Philosophy, or Computer Science. These courses also can be used to help meet FLORS requirements with breadth goals set out by the adviser.

Seminar (continuous enrollment)
- PSYC 902 Proseminar

Quantitative Psychology. The program provides a unique doctoral training experience. Graduate students are trained as quantitative specialists who can interface quantitative methods with substantive issues across the behavioral and social sciences. Students develop a substantial background in quantitative methods. Some students pursue more depth in qualitative content areas, and some pursue complementary expertise in a nonquantitative content area (e.g., clinical, cognitive, developmental, health, social). The exact nature of a student’s nonquantitative focus depends on the interests and goals of the student and the faculty mentor. Current methodological interests include psychometric methods, item response theory, structural equation modeling, multivariate statistics, multilevel modeling, nonparametric statistics, and other topics in quantitative methods as applied in the behavioral and social sciences.

Recent graduates are employed in academic programs, basic research units in academic and organizational settings, applied research, and freelance consultation. Nearly all graduates proceed directly to full-time employment. About half the positions are academic, nearly all in upper-tier universities with graduate programs. Quantitative specialists have substantial technical expertise that provides an advantage in the job market. They often earn higher starting salaries and have access to additional income-enhancing activities such as grants and departmental consulting.

The program requires a total of 58 nonthesis hours (15 courses). Requirements are as follows:

- Cognitive neuroscience
- Developmental science
- Aging and cognition
- Child language
- Quantitative methods

The training program emphasizes the development of a broad-based foundation in theory, research methods, technical skills, and quantitative analysis for application in a variety of basic and applied research settings. Areas of focus of current faculty members include memory, cognitive development, language, perception, attention, aging, and cognition.
Quantitative Training
Quantitative Foundations (8 hours). Quantitative foundations include two semesters of basic psychological statistics, offered yearly:
PSYC 790 Statistical Methods in Psychology I
PSYC 791 Statistical Methods in Psychology II
Area-specific Methodology (One course, 3 hours minimum).
E.g., PSYC 815, PSYC 816, PSYC 818, PSYC 819
Quantitative Core (Five courses, 20 hours minimum). The quantitative core is a more intense series of courses in fundamental quantitative areas, currently including:
PSYC 889 Applied Nonparametric Statistical Methods
PSYC 892 Test Theory
PSYC 893 Multivariate Analysis
PSYC 894 Multilevel Modeling
PSYC 895 Categorical Data Analysis
PSYC 896 Structural Equation Modeling I
Quantitative Concentration (Four courses, 12 hours minimum). The quantitative concentration focuses on a range of specialized applications, currently including:
PSYC 887 Factor Analysis
PSYC 990 Methods for Clustering and Classification
PSYC 991 Longitudinal Data Analysis
PSYC 993 Seminar: Advanced Quantitative Topics
PSYC 996 Structural Equation Modeling II
Advanced courses offered in other departments or schools also may be taken with the director’s consent.
Quantitative Proseminar (Six semesters, 6 hours minimum). The quantitative proseminar is an ongoing discussion series covering advanced topics and emerging issues. PSYC 993 Seminar: Advanced Quantitative Topics (3 hour per semester)
Courses will be added to these offerings. In addition, students complete at least one semester of a Research Methodology course. Methodology courses associated with the different substantive foci are available.
Minor Concentration (Three courses, 9 hours minimum, e.g., Cognitive Psychology, Developmental Psychology, Health Psychology, Social Psychology, Education, Mathematical Statistics). The minor concentration is fulfilled by taking three or more courses in a specialized area, education (e.g., testing, evaluation), mathematical statistics, or a tailored curriculum that meets the goals and objectives of the student (e.g., business).
General Requirements
M.A. thesis (1-9 hours plus public defense, typically completed by the end of the second year of training, three-person committee)
Comprehensive written and oral examinations (Review paper, dissertation proposal, elaborate project, or written examination plus public defense, typically completed by the end of the third year or early in the fourth year of training, five-person committee with one outside member)
Foreign Language or Other Research Skills (FLORS) requirement (Typically met by demonstrating competence in one or more computational languages enabling specialized study in quantitative methods. Proficiency is determined by a review of the student’s body of work by the program director and the student’s dissertation advisor at the completion of the written comprehensive examination.)
Dissertation (1-12 hours plus public defense, five-person committee with one outside member)
All general requirements apply. The thesis and dissertation may be empirical studies of quantitative issues, original quantitative innovations, or cutting-edge applications that use best-practice quantitative methods on a topic related to the student’s career goals.
Students have the choice of writing a paper, conducting an in-depth project, or taking a comprehensive examination. Students deliver a public presentation to a five-person committee, which functions as the oral component of the comprehensives. For the paper option, students can write a review paper covering a topic with either a substantive or quantitative focus. Students also conduct a meta-analysis of a topic with either a substantive or quantitative focus. For the in-depth project, students can prepare a full set of lecture materials (e.g., PowerPoint slides, written lectures, homework assignments) for a quantitative course suitable for offering at the graduate level. For the comprehensive examination option, students work with their committees to prepare a reading list and a set of questions to demonstrate mastery of the material. Written examinations typically are conducted in four three-hour blocks of time.
Additional Graduate Experiences. Quantitative psychology students have opportunities for experience in teaching, statistical consulting, and data analysis through employment in various settings. Opportunities may include teaching undergraduate statistics in psychology, research assistantships in quantitative projects, assisting in research at an institute, such as the Institute for Life Span Studies, or working in the Research Design and Analysis unit, which provides college-wide statistical consultations. Students have access to quantitative workshops and brown-bag lunches offered regularly by the Research Design and Analysis unit. These workshops are led by national leaders in quantitative methods. Special resources for attending national workshops and conventions are also available.
Quantitative Minor. A minor in quantitative psychology is offered for graduate students in any of the department’s major programs and for select programs in the College of Liberal Arts and Sciences (e.g., sociology). The quantitative minor is an addition to the regular program and does not replace any existing or future requirements of the student’s major program. Students desiring a major emphasis in quantitative psychology should apply directly to the quantitative psychology program.
The minor consists of advanced course work in statistics, measurement, and methodology. The quantitative minor provides the student with elevated levels of quantitative expertise to enhance the overall quality of the research program. It gives students a competitive edge in the job market. Many faculty positions now require expertise in both a specific content area and in quantitative methods. Advanced quantitative skills also offer students additional job opportunities. The quantitative minor provides the additional credentials needed to pursue these jobs.
The minor requires four courses in quantitative psychology beyond the basic statistics requirements (PSYC 790, PSYC 791). The classes normally are taken in the department but can come from other departments with approval. Currently available courses include Categorical Methods, Nonparametric Statistics, Multivariate Methods, Language, and Quantitative. Students work with a faculty mentor to customize a concentration that suits the needs of the student and the expertise of the available faculty. The program is appropriate for students who wish to be trained in the traditional divisions of psychology (e.g., cognitive-developmental, social-developmental, quantitative-developmental) as well as those whose interests may not fall squarely within traditional divisions.
Curriculum. The curriculum involves 35 hours of formal developmental courses in addition to master’s, Foreign Language or Other Research Skills (FLORS), and dissertation research hours. Students are expected to enroll in a biweekly Proseminar on Developmental Science (6 semesters minimum). The program allows students to pursue their developmental research interests and accumulate academic credentials that give access to the job market of their choice. Formal course requirements are as follows:
Statistics, Design, and Professional Issues (14 hours)
PSYC 790 Statistical Methods in Psychology I (4 hours)
PSYC 791 Statistical Methods in Psychology II (4 hours)
PSYC 815 Design and Analysis for Developmental Research
PSYC 982 Issues in Scientific Conduct
Core Developmental Courses (12 hours)
PSYC 691 The Psychology of Aging
PSYC 870 Cognitive Development
PSYC 825 Social Development
PSYC 923 History and Systems of Developmental Psychology: Developmental Theory
Concentration (9 hours, minimum). The concentration builds expertise in an area chosen by the student in conjunction with the faculty adviser. Courses offered outside the department may count toward the concentration. The concentrato

The Department of Psychology offers programs in social, cognitive, quantitative, developmental, and clinical psychology. An interdepartmental program in clinical child psychology is available. See Clinical Child Psychology in this chapter of the catalog for information.

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tion can be either very focused or a uniquely tailored hybrid of courses. Some examples of concentrations that students may create are listed below. Many related courses may be substituted for the same general theme of the concentration and students can create a concentration that fits with their interests and educational objectives. Possible concentrations include

**General Cognitive Development**
- PSYC 723 Advanced Cognitive Psychology
- PSYC 800 Experimental Psychology: Cognition and Aging
- PSYC 872 Attention, Perception, and Learning in Infancy

**Social-personality Development**
- PSYC 777 Social Psychology: Theory, Research, and Clinical Applications
- PSYC 670 Theories of Personality
- PSYC 962 Advanced Personality

**Quantitative Developmental Methods**
- PSYC 896 Structural Equation Modeling I
- PSYC 996 Structural Equation Modeling II
- PSYC 893 Multivariate Analysis

**Health and Rehabilitation Specialty.**
- PSYC 774 Advanced Social Psychology I
- PSYC 775 Advanced Social Psychology II (Current Issues)
- PSYC 825 Social Development

**Clinical Requirements.** Eight content courses:
- PSYC 888 Diversity Issues in Clinical Psychology or PRE 875 Cross Cultural Counseling
- PSYC 898 Professional Practice in Clinical and Health Psychology
- PSYC 946 Theories and Methods of Psychotherapy
- PSYC 960 Advanced Psychopathology
- PSYC 961 Biological Foundations of Psychopathology
- PSYC 968 Research Methods in Clinical Psychology
- PSYC 975 Professional and Ethical Problems in Clinical Psychology or PRE 900 Legal, Ethical, and Professional Issues in Professional Psychology

**Research Skill Proficiency.** This requirement normally is met by completing all of the following with a grade of B or higher in each: PSYC 790 Statistical Methods in Psychology I or PRE 811 Analysis of Variance, PSYC 791 Statistical Methods in Psychology II or PRE 904 Regression Analysis, PSYC 791 Statistical Methods in Psychology II, and PSYC 968 Research Methods in Clinical Psychology. Because these courses are required elsewhere in the curriculum, they do not represent additional required hours.

**Examinations.**
- **Thesis and Dissertation.** 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.

**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.
PSYC 706 Special Topics in Clinical Child Psychology: (3). A course offering detailed discussion of the literature and research methods of a special topic within clinical child and pediatric psychology. Topic and instructor may change by semester and will be announced in the Schedule of Classes. May be repeated. (Same as ABC 706, formerly HDFL 706.) Prerequisite: Graduate standing in clinical child psychology and instructor permission. LEC

PSYC 710 Feminist Issues in Psychology (3). Detailed examination and discussion of psychological theory and research from a feminist perspective. Specific topics will vary. The goal of the course is to facilitate students’ ability to develop feminist critiques of existing research and theory as well as to generate nonsexist alternative approaches. Open to advanced undergraduates with consent of instructor. Prerequisite: Some familiarity with research methods in the social sciences and graduate standing. (Same as LING 735.) 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 704/LING 735 and six additional credit hours in psychology, or permission of the instructor. LEC

PSYC 725 Cognitive Neuroscience (3). A survey of the critical issues within cognitive and behavioral neuroscience. The course will provide information about neural physiology, functional neuroanatomy, and psychophysiological research methods. Human cognition and the neurophysiology that subserves the primary cognitive functions will be discussed. LEC

PSYC 735 Psycholinguistics (3). A detailed examination of issues in the processing of language. The course will provide a survey of research and theory in psycholinguistics, reflecting the influence of recent developments in experimental psychology. Spoken and written language comprehension and language production processing will be examined. (Same as LING 735.) LEC

PSYC 737 Psycholinguistics II (3). An in-depth examination of selected topics in psycholinguistics. Topics may include spoken language processing, visual lan- guage processing, neurolinguistics, prosody, and syntactic processing. (Same as PSYC 737.) Prerequisite: PSYC 704/LING 735 or consent of instructor. LEC

PSYC 750 Advanced Seminar in Gender Identity and Sexual Orientation (3). De- sign to provide a reservoir of research on the causes and consequences of variations in gender identity, sexual orientation or affectional preference, sex roles, and sex- linked behaviors. Prerequisite: Consent of instructor. LEC

PSYC 757 Theories of Perception (3). A consideration of the facts and theories of human perception. The emphasis will be on vision, although hearing, smell, pain, and other senses will also be discussed. Of particular concern is the question of perceptual modifiability and the response of the human observer to unusual sensory environments. Prerequisite: PSYC 104, LEC

PSYC 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 continu- ing 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 become a part of a particular theory, specific topics will vary. 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: overview of general anatomy and physiolo- gy of each body system; description of how deviations from normal physiological and physiological function result in common disorders, methods for distinguishing psychological from organic etiologies, indications and side effects of medications for common disorders, and description of roles of key members of the health care team. Prerequisites: Graduate standing in psychology, nursing, and health-related fields, or by permission of instructor. LEC

PSYC 782 Research Methods in Child Language (3). A survey of methods for studying phonological, morphological, syntactic, and semantic change during lan- guage development. Methods include: diary interpretation, language sample analysis, probe elicitation tasks, and clinical assessment. (Same as LING 782.) Prere- quisite: PSYC 735 or equivalent or consent of instructor. LEC

PSYC 784 Proseminar in Communication and Aging (1). A weekly forum for stu- dents and faculty to discuss professional issues and interdisciplinary research in communication and aging. May be repeated for credit. (Same as COMS 784.) (Same as SPLH 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 com- munication) perspective on aging. The proseminar surveys contemporary basic and applied research, service programs, and policy and management issues in gerontology. (Same as ABC 787, AMS 767, COMS 787, and SOC 767.) (Formerly HDFL 787.) LEC

PSYC 790 Statistical Methods in Psychology I (4). Elementary distribution theory; t- test; simple regression and correlation; multiple regression and multiple correlation; curvilinear regression; logistic regression; general linear model. Applications across the behavioral and social sciences. Prerequisites: (Same as ABC 787, AMS 767, COMS 787, and SOC 767.) (Formerly HDFL 787.) LEC

PSYC 791 Statistical Methods in Psychology II (4). Continuation of PSYC 790. One- way analysis of variance, linear trends, contrasts, post hoc tests; multi-way analysis of variance, interactions; categorical data, crosstabulation, and chi-square tests; block design and random-effects models; analysis of variance with repeated measures; repeated measures analysis of variance; general linear model. Applications across the social, educational, and behavior sciences are emphasized. Course consists

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of three hours of lecture and a required one-hour lab session where computing applications are taught. Prerequisite: PSYC 795, 797, 799, or consent of instructor. LEC

PSYC 792 Computer Analysis of Psychological Data (3) Application of computer methods 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 Computer and Psychology (3) Introduction to the use of personal computers to facilitate and standardize administration of research protocols and to automate data collection. Lectures and projects emphasize direct application to research in the behavioral sciences. Prerequisite: Graduate standing in the Department of Psychology and consent of instructor. LEC

PSYC 796 Computer Models of Brain and Behavior (3) An introduction to the techniques of computer modeling 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 adults within cultural and developmental contexts. The range of psychological instruments available on personal computers or mainframe is required. Prerequisite: EECS 128 or EEC 132 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 the Windows and DOS operating system, or 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, problem solving, games, social interaction, and individual differences. May be repeated with permission. Prerequisite: Previous course work beyond the introductory level in psychology or a closely related area, 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 are graded S/F. (Same as ABSC 797, LING 799, and SPLH 799) (Formerly HDFL 799). LEC

PSYC 800 Experimental Psychology: Issues and Methods (3) An advanced survey of theory and research in a selected area of experimental psychology. Continual enrollment for four semesters is required of entering graduate students in experimental psychology. Open to other students with graduate standing in psychology or a closely related field. May be repeated with permission. LEC

PSYC 802 Social-psychological Aspects of Health, Disability, and Associated Life Stress (3) Focuses on biological, cognitive/affective, and social causes and effects of disease and disability; attitudes and interpersonal relations; hoping, coping, and reality issues; values; professional-client relations; public media and societal rehabilitation. A departmental core course for graduate students. 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 809 Professional Issues: Clinical Psychology (2) Consideration of special professional issues related to the child and family oriented clinical practice, and in the development of a professional identity. Topics include critical issues in including ethical, legal, cultural, empirical, and clinical aspects of research and practice. May be repeated. (Same as ABSC 809, formerly HDFL 809.) Prerequisite: Graduate standing in clinical child psychology. LEC

PSYC 811 Achievement and Intellectual Assessment in Clinical Psychology (3) Course covers the basic theory, research, administration, and reporting of psychological assessment of development, intelligence, and achievement for children, adolescents, and adults within cultural and developmental contexts. The range of psychological instruments examined includes, for example, WIAT, K-ABC, WJ-J, S-B, WISC, WAIS, and WPPSI. (Same as ABSC 811.) Prerequisite: Graduate student in clinical psychology. LEC

PSYC 812 Behavioral and Personality Assessment of Children (3) Lecture, laboratory, field work, and supervision appointment. Theory and applications in the psychological evaluation of children with standardized assessment techniques. The administration, scoring, interpretation, and reporting of behavioral and personality functioning in children. (Same as ABSC 812, formerly HDFL 812.) Prerequisite: Graduate standing in clinical child psychology. LEC

PSYC 814 Advanced Child and Family Assessment (3) Lecture, laboratory, field work, and supervision appointment. Supervised experience in specialized psychological assessment approaches for children and families. Emphasis on interviewing, observation, psychological testing and consultation, family, administration, and reporting of mental health functioning of children and families. Experience with clinical populations, and communication with referral sources. Same as ABSC 814, formerly HDFL 814). Prerequisite: Graduate standing in clinical child psychology. LEC

PSYC 815 Design and Analysis for Developmental Research (3) Coverage of the philosophy and basic principles of group-design research, with a special emphasis on designs that are appropriate for developmental studies. Designs for both experimental and quasi-experimental research are covered, and appropriate statistical procedures are presented concomitantly with the designs. Individual-difference analyses and statistical control issues are also addressed. LEC

PSYC 816 Design and Analysis for Neuroimaging Research (3) Course covers research design and analysis issues for event-related potential (ERP) and functional magnetic resonance imaging (fMRI) studies. Repeated measures, statistical parametric mapping, principal components analysis, and independent components analysis techniques are covered. Both practical and theoretical aspects of these statistical techniques will be explored in Matlab environments. Matrix algebra and vector calculus are not required but not required. Prerequisite: PSYC 790 and 791 or equivalent are required. LEC

PSYC 818 Experimental Research Methods in Social Psychology (3) Systematic discussion of the techniques of research in social psychology, with practice in the utilization of selected methods. Prerequisite: One course in social psychology in addition to introductory social psychology. LEC

PSYC 819 Field and Evaluation Research Methods in Social Psychology (3) Basic principles and practices of field methods in basic 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. LEC

PSYC 820 Advanced Child Development (3) A survey of the basic empirical research in the early and middle development of the biological, psychological, cognitive, social, and personality, social behavior, and socialization processes of these literatures are integrated and their implications for social application are addressed. (Same as ABSC 820, formerly HDFL 820.) Prerequisite: A course in child development or equivalent. LEC

PSYC 825 Social Development (3) A lecture and discussion course in individual development, as well as the literature on family processes, peer relations, aggression and prosocial behavior, child abuse and neglect, family violence, child care, and the role of the family. (Formerly PSYC 880.) Prerequisite: Same as ABSC 825.) Prerequisite: A course in child psychology or development. LEC

PSYC 831 Advanced Human Learning and Memory (3) An in-depth analysis of current research and theory. Focus will be on experimental methodology in these areas. LEC

PSYC 832 Clinical Health Psychology I: Health Promotion and Disease Prevention (3) An overview of the field of health psychology as applied to health promotion and disease prevention. Content areas 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 psychology or health-related fields, or permission of instructor. LEC

PSYC 833 Clinical Health Psychology II: Acute and Chronic Illness (3) An overview of the field of health psychology as applied to acute and chronic illness in adult, adolescent, and child populations. Content areas include psychological aspects of acute and chronic illness, including relevant empirically supported assessment and intervention strategies, adherence to medical regimens, pain, and enhancement of the psychologist's role in medical settings. Prerequisite: Graduate standing in psychology or health-related fields, or permission of instructor. LEC

PSYC 834 Clinical Health Psychology III: Physical Aspects of Health and Disease (3) An overview of physical manifestations of health and disease. Content areas include overview of anatomy and physiology of each body system, description of how deviations form normal anatomical development and physiological function result in conditions of disease, methods for psychological research on psychosocial role of disease and disability, and similar constructs. Programming skill in a high-level language available on personal computers or mainframe is required. Prerequisite: EECS 128 or EECS 132, PSYC 370, or equivalent courses or experience. LEC

PSYC 835 Clinical Practicum IV: Health (3) Supervised assessment and treatment of individuals and families within a medical setting, as well as multidisciplinary consultation. Inpatient and outpatient clinical health psychology rotations may include pediatrics, oncology, pain, rehabilitation, and other health psychology related fields. Emphasis in selection of and training in psychological intervention strategies is on the use of empirically supported treatments where possible. Grading on Satisfactory/Fail basis. Prerequisite: PSYC 970 and graduate student in clinical health psychology specialty. FLD

PSYC 836 Clinical Practicum V: Health (3) Continuation of PSYC 835. Prerequisite: Graduate standing in health psychology or related fields, or by permission of instructor. LEC

PSYC 838 Pain and Its Management (3) Focuses on biological, cognitive/affective, and social causes and effects of pain. Emphasis on basic research methods in pain, origins of pain, and how the experience of pain alters many aspects of the individual’s life. Topics include anatomy and physiology of pain, impact of pain on a variety of aspects of individuals’ lives, treatments for pain, and the role of various health
care professionals in treating pain. Discussions also will include basic research meth- 
ods in the areas of pain, barrier to adequate pain management, and eth- 

PSYC 839 Palliative Care in Health Psychology (3). Based on the biopsychosocial model, this course will focus on current palliative care community and hospital settings by health care professionals. Classes will be discussion 

PSYC 841 Stress and Coping (3). Theories and research on conceptualization, assessment, and effects of stress. Focus on coping processes and other determinants of adjustment to stressful conditions. Discussion of psychological interventions for managing stress and trauma. Prerequisite: Graduate student in psychology or related fields. LEC

PSYC 842 Specialized Health Psychology Practicum (1-3). Specialized advanced practicum in clinical health psychology, with an area of emphasis mutually de- 

PSYC 845 Impression Formation and Interpersonal Behavior (3). Intensive investi- 
gations of the processes involved in impression formation and of the effects of esti-
thed impressions upon interpersonal communications. (Same as COMS 835.)

PSYC 846 Practicum in Clinical Child Psychology I (1-3). Lecture, laboratory, 
fieldwork, and supervision appointment. Psychological evaluation and treatment of chil- 
dren and their families; supervised, progressive experience in psychological interven-
tions in clinical child psychology. Same as PSYC 846 (formerly HDSF 846). Prerequi-
tite: Graduate standing in clinical psychology and instructor permission. LEC

PSYC 847 Practicum in Clinical Child Psychology II (1-3). A continuation of ABSC 846/PSYC 846. (Same as ABSC 847, formerly HDSF 847.) Prerequisite: Graduate 

PSYC 850 Assessment I: Foundations of Psychological Assessment (3). Intro- 
duction to the history, methods and theory underlying psychological assessment techniques and methods. Students learn to administer, score, and interpret standardized tests for clinical decision making. Diagnostic assessment 

PSYC 853 Advanced Acoustical and Psychological Aspects of Musical Behavior (3). Study and experimental investigation of acoustic, psychoacoustic, and psycho-

PSYC 864 Clinical Neuropsychology (3). Brain-behavior relationships in humans; 

PSYC 865 Advanced Psychological Assessment: Interview-based Techniques (3). Lecture and fieldwork. Advanced clinical interviewing. Structured diagnostic inter-
viewing. Coverage includes: professional writing (field and clinical interviewing). Report writing focused on documentation of clinical and 

PSYC 870 Cognitive Development (3). A lecture/discussion course in cognitive develop-
ment. The course will contrast the theory and research of Jean Piaget and his followers, 

PSYC 872 Attention, Perception, and Learning in Infancy (3). Course covers the 

PSYC 875 Advanced Assessment: Integration of Assessment Techniques (3). Lecture and fieldwork on selection, administration, scoring and interpretation and 

data on affectivity and ability. Focus on objective personality assessment, projective personality assessment, psychometric theory and practice, and personality assessment batteries. Prerequisite: PSYC 855 or consent of instructor. LEC

PSYC 881 Proseminar in Quantitative Behavioral and Social Sciences (1). This course is an open forum discussion of issues, topics, and presentations in quantitative behav-

PSYC 891 Intelligence and Cognition (4). Introduction to the central methods used in the analysis of multivariate data. Includes linear transformations, multivariate analysis of variance, multiple regression, discriminant analysis, correlation, factor analysis, structural equation modeling, cluster analysis, and confirmatory factor analysis. Application across the social and behavior sciences are emphasized. Course consists of three hours of lecture and a required one-hour lab session where computing applications are taught. Prerequisite: PSYC 790 and 791 or equivalent, or consent of instructor. LEC

PSYC 892 Test Theory (4). This course covers the theory behind, and applica-
tion of, exploratory factor analysis. Topics include a review of multiple linear regres-
sion and matrix algebra. In-depth coverage is devoted to diagrams, model specification, goodness of fit, model selection, parameter estimation, rotation meth-
ods, scale development, and sample size and power issues. Extensions to confirmatory 
targets are elaborated. Both the theory underlying factor analytic techniques and hands-on application using software are emphasized. Applications across the social and behavioral sciences are emphasized. Course consists of three hours of lecture and a required one-hour lab session where computing applications are taught. Prerequisite: PSYC 790 and 791 or equivalent, or consent of instructor. LEC

PSYC 893 Multivariate Analysis (4). Introduction to the central methods used in the analysis of multivariate data. Includes linear transformations, multivariate analysis of variance, multiple regression, discriminant analysis, correlation, factor analysis, structural equation modeling, cluster analysis, and confirmatory factor analysis. Application across the social and behavior sciences are emphasized. Course consists of three hours of lecture and a required one-hour lab session where computing applications are taught. Prerequisite: PSYC 790 and 791 or equivalent, or consent of instructor. LEC

PSYC 894 Multilevel Modeling (4). Statistical methods for modeling multilevel (hierarchically structured) data. Topics include a review of ordinary least squares regression analysis, random effects ANOVA, intraclass correlation, multilevel re-
gression, testing and probing interactions, maximum likelihood estimation, model
assumptions, model evaluation, and the analysis of longitudinal data. There will be a heavy emphasis on the theory underlying multilevel modeling techniques and hands-on application using software. Applications across the social, educational, and behavioral sciences are emphasized. Course consists of three hours of lecture and a required one-hour lab session where computing applications are taught. Prerequisite: PSYC 790 and 791 or equivalent, or consent of instructor. LEC

PSYC 895 Categorical Data Analysis (4). Multivariate analyses of count data. Error models, statistical inference, logistic models, logit models, logistic regression. Homogeneity, symmetry, and selected other topics. Applications across the behavioral and social sciences are emphasized. Course consists of three hours of lecture and a required one-hour lab session where computing applications are taught. Prerequisite: PSYC 790 and PSYC 791 or equivalent, or consent of instructor. LEC

PSYC 896 Structural Equation Modeling (4). Introduction to statistical methods for modeling latent variables. Topics include a review of latent variables, covariance structures analysis, mean structures analysis, confirmatory factor analysis (CFA), structural equation modeling (SEM), multiple group CFA, longitudinal CFA, longitudinal SEM, Hierarchical CFA, and Multi-trait Multi-Method SEM. Applications across the behavioral and social sciences are emphasized. Course consists of three hours of lecture and a required one-hour lab session where computing applications are taught. Prerequisite: PSYC 790 and 791 or equivalent, or consent of instructor. LEC

PSYC 897 Master’s Thesis in Clinical Child Psychology (1-10). Supervised research experience completing thesis leading to master’s degree. (Same as ABSC 897.) RSH

PSYC 898 Proseminar: Professional Issues in Clinical and Health Psychology (3). Discussion of current theoretical, empirical, and applied issues in clinical and health psychology involving students, faculty, guest speakers. Prerequisite: Graduate student in clinical psychology. RSH

PSYC 899 Thesis (1-10). RSH

PSYC 902 Proseminar in Experimental Psychology (1). Seminar in experimental psychology to be conducted in rotation by the experimental psychologists on the staff and a monthly visiting experimental psychologist. LEC

PSYC 905 Psychopathology in Children (3). Diagnosis and treatment of psychological problems in childhood and adolescence. (Same as ABSC 905.) Preference given to graduate students in clinical psychology; school psychology, and counseling psychology. Prerequisite: Fifteen hours of graduate credit in psychology or consent of instructor. LEC

PSYC 921 Seminar in Early Development (3). A seminar devoted to factors affecting early human development with some attention to theoretical formulations and the relevant animal literature. LEC

PSYC 923 History and Systems of Developmental Psychology: Developmental Theory (3). An intensive study of traditional and recent developmental theories with an emphasis upon the role of heredity, early stimulation, reinforcement, and modification as each affects the course of development of children. LEC

PSYC 927 Seminar in Psychology (3). A detailed study of a specific 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). Consideration of current psychological theory and research on adult intimate relationships, dating, committed relationships, dissolution of committed relationships. Students will be expected to be involved in on-going empirical research in the area. Prerequisite: Graduate level courses in research design and statistics. LEC

PSYC 933 Seminar: The Measurement of Attitudes (3). An examination of the concept of an attitude and the methods devised to assess the various aspects of attitudes. Prerequisite: PSYC 578 or consent of instructor. LEC

PSYC 935 Seminar in Group Dynamics (3). Intensive examination of selected problems in the functioning of small groups. May be taken for two semesters. LEC

PSYC 936 Group Therapeutic Techniques (3). LEC

PSYC 943 Advanced Practicum in Clinical Child Psychology III (1-3). Lecture, laboratory, field work, and supervision appointment. Advanced psychological intervention techniques for children, youth, and families; supervised progressive experience in application of behavioral and psycho-therapeutic methods to behavioral and emotional problems. (Same as ABSC 943, formerly HDFL 945.) Prerequisite: Graduate standing in clinical child psychology and instructor permission. FLD

PSYC 944 Advanced Practicum in Clinical Child Psychology IV (1-3). A continuation of ABSC/HDFL 943 and PSYC 943. (Same as ABSC 944, formerly HDFL 944.) Prerequisite: Graduate standing in clinical child psychology and instructor permission. FLD

PSYC 946 Theories and Methods of Psychotherapy (3). Comparative examination and analysis of major theories and approaches to psychotherapeutic interventions, core principles of therapeutic change, scientific approaches to establishing treatment efficacy, current interventions. Prerequisite: Nine hours in graduate clinical psychology or consent of instructor. LEC

PSYC 947 Advanced Practicum in Clinical Child Psychology V (1-5). A continuation of ABSC/HDFL 944 and PSYC 944. May be taken in more than one semester. (Same as ABSC 947.) Prerequisite: Graduate standing in clinical child psychology and instructor permission. FLD

PSYC 949 Empirically Supported Treatment (3). This course provides an overview of theoretical and applied issues germane to the contemporary empirically supported treatments movement in clinical psychology. The course will include an in-depth examination of several psychotherapy protocols (e.g., cognitive therapy for depression) which have been identified as “empirically supported,” with considerable attention accorded to implementation of the characteristic techniques of such interventions. LEC

PSYC 960 Advanced Psychopathology (3). Review of current nosology of adult psychopathological syndromes emphasizing development of diagnostic skills. Critical survey of recent research and theory related to the etiology, course, prognosis, and treatment of adult psychopathological conditions. Prerequisite: Graduate student status in clinical child psychology, counseling psychology, or clinical psychology. LEC

PSYC 961 Biological Foundations of Psychopathology (3). A review of fundamental topics in the neurosciences and their relevance to selected psychopathological disorders. The fundamental topics are taken from genetics, neuroanatomy, neuropsychology, and neurochemistry. The disorders include schizophrenia, depression, anxiety disorders, Alzheimer’s disease, Parkinson’s disease, and Huntington’s disease. Prerequisite: Graduate status in clinical or counseling psychology. LEC

PSYC 962 Advanced Personality (3). A survey of selected advanced topics in the area of personality. Includes review of theoretical and research issues in the area of personality. Prerequisite: Consent of instructor. LEC

PSYC 963 Clinical Child Psychology Internship (1). Three consecutive enrollments, covering a minimum of eleven months of experience in an approved clinical psychology field setting; supervision by qualified clinical child psychology faculty and full-time students. Required of all clinical child psychology graduate students. An intensive guided experience in application of clinical child psychology theory, methods, and practices. Integrates scientific and clinical aspects of field. (Same as ABSC 963, formerly HDFL 963.) Prerequisite: Completion of Ph.D. comprehensive examinations and permission of clinical psychology faculty. FLD

PSYC 964 Clinical Practicum I (3). Lecture, laboratory and field work, and supervision appointment. Psychological evaluation and treatment of individuals, couples, families, and groups; supervised, progressive experience in psychological treatment and in the clinical evaluation of intellectual, personality, and social functioning. Emphasis in selection of and training in psychological intervention strategies is on the use of empirically supported treatments where possible. Grading on Satisfactory/Fail basis. Prerequisite: Graduate student in clinical psychology program. FLD

PSYC 965 Clinical Practicum II (3). A continuation of PSYC 964. Grading on Satisfactory/Fail basis. Prerequisite: PSYC 964 or permission of instructor. FLD

PSYC 966 Clinical Practicum III (3). A continuation of PSYC 964. Grading on Satisfactory/Fail basis. Prerequisite: PSYC 964 or permission of instructor. FLD

PSYC 967 Psychotherapy with Families (3). Clinical approaches to marriage and family therapy. The course will incorporate the theoretical positions, research findings, clinical methods, and technical problems in marriage and family therapy. Prerequisite: PSYC 946. LEC

PSYC 968 Research Methods in Clinical Psychology (3). Systematic consideration of research methods in clinical psychology including identification of a research problem, selection of the research design and assessment strategies, and methods of evaluating the results. The principles, pitfalls, artifacts, biases, and sources of controversy in research in this area are also covered. Prerequisite: Graduate standing in clinical or counseling psychology. LEC

PSYC 969 Advanced Practicum in Clinical Child Psychology (1-3). Lecture, laboratory, field work, and supervision appointment. Advanced psychological treatment of the individual, couple, family, and group client; supervised, progressive experience in the clinical application of psychotherapeutic treatment methods with emphasis on the use of empirically supported interventions where possible. Grading on Satisfactory/Fail basis. Prerequisite: PSYC 966 or consent of instructor. FLD
PSYC 970 Clinical Practicum V (3). A continuation of PSYC 969. Grading on Satisfactory/Unsatisfactory basis or as elective. Prerequisite: PSYC 969 or consent of instructor. FLD.

PSYC 974 Clinical Psychology Internship (1-3). Three consecutive enrollments, covering a minimum of eleven months of experience in an approved clinical psychology field setting; supervision by clinical psychology faculty and field staff clinical psychologists. Required of all clinical psychology program students. An intensive guided experience in the application of clinical psychology theory, methods, and practices. An emphasis upon the relationships between scientific and clinical functions. Integrations between research and clinical practice. Prerequisite: Completion of Ph.D. comprehensive examinations and consent of clinical psychology faculty. FLD.

PSYC 975 Professional and Ethical Problems in Clinical Psychology (3). Interprofessional relationships, case security, legal aspects, ethical code of practice, clinical administration, and problems in the clinical practice of psychology. Issues involving ethics in research will also be explored. Prerequisite: Consent of instructor. LEC.

PSYC 976 Therapeutic Intervention 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, system approaches, parent education and play therapy by the right therapist for a specific child with a particular problem. (Same as ABSC 976.) Prerequisite: Instructor permission. 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 and experience in a special area of specialization not covered in regular courses. Prerequisite: Students must consult with members of the clinical faculty and propose an acceptable project in advance of enrollment. FLD.

PSYC 980 Special Problems in Psychology (1-5). Investigation of a special research problem or area of interest in an area not covered in regular courses. Prerequisite: Consent of instructor. RSH.

PSYC 981 Teaching Psychology (1). Discussion of the problems and techniques of teaching psychology at the undergraduate level. A minimum of one credit of this course must be taken by all students during the two semesters of the year prior to their appointment in the department. Only three hours may count toward the Ph.D. degree. LEC.

PSYC 982 Issues in Scientific Conduct (3). Lectures and discussion on issues in the conduct of a scientific career, with emphasis on practical topics of special importance to the behavioral sciences. Topics will include the ethical 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 SPLH 982.) LEC.

PSYC 983 Methodology (3). Inferential problems in experimental psychology. Prerequisite: PSYC 791 on certain topics. LEC.

PSYC 984 Methods for Clustering and Classification (3). Statistical methods for identifying classes, clusters, and taxa. Topics include k-means, discriminant analysis, hierarchical clustering algorithms, additive trees, neural network models for clustering, latent class models, finite mixture models, and models for skills/cognitive diagnosis. Applications across the social, educational, and behavior sciences are emphasized. Prerequisite: PSYC 790 and 791 or equivalent. LEC.

PSYC 985 Longitudinal Data Analysis (3). Reviews and contrasts various statistical methods for the analysis of change. Course focuses on various techniques to analyze longitudinal (repeated-measures) data beyond the repeated-measures ANOVA framework. Techniques covered include latent change scores, latent difference scores, individual-differences modeling of latent residual and change scores, intra-individual differences modeling (e.g., growth curve, mixed modeling) and growth mixture modeling. Applications across the social, educational, and behavior sciences are emphasized. Prerequisite: PSYC 790 and 791 or equivalent. LEC.

PSYC 991 Longitudinal Data Analysis (3). Reviews and contrasts various statistical methods for the analysis of change. Course focuses on various techniques to analyze longitudinal (repeated-measures) data beyond the repeated-measures ANOVA framework. Techniques covered include latent change scores, latent difference scores, individual-differences modeling of latent residual and change scores, intra-individual differences modeling (e.g., growth curve, mixed modeling) and growth mixture modeling. Applications across the behavioral and social sciences are emphasized. Prerequisite: PSYC 896 or equivalent, or consent of instructor. LEC.

PSYC 993 Seminar: __________ (1-5). LEC.

PSYC 996 Structural Equation Modeling II (3). Continuation of PSYC 896. Advanced applications of modern methods for testing hypotheses on multivariate correlational data in the behavioral and social sciences. Topics include advanced confirmatory factor analysis, mediation and moderation among latent variables, latent growth curve modeling, and other latent variable mean and covariance structures analysis techniques. Applications across the behavioral and social sciences are emphasized. Prerequisite: PSYC 896 or equivalent, or consent of instructor. LEC.

PSYC 998 Doctoral Dissertation in Clinical Child Psychology (1-10). Research experience making original contribution to literature in clinical child psychology. (Same as ABSC 998, formerly HDFL 998.) THE.

PSYC 999 Dissertation (1-12). THE.

Public Administration

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Professors: Frederickson, Maynard-Moody, Nalbandian, Romzek
Associate Professors: Epp, Goodyear
Assistant Professors: Dehart Davis, Goerdel, LeRoux, Llrenes, Marlowe, Moody, Pandey

The department offers an M.P.A. degree and a Ph.D. degree. The M.P.A. degree is designed for students preparing for public service careers or for mid-career students wishing to pursue graduate studies for career advancement. The Ph.D. degree is designed primarily for students anticipating careers in research and teaching.

Master of Public Administration Degree

The Department of Public Administration houses the Edwin O. Steene 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 Administration 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 an online or paper graduate application form; one official transcript from each undergraduate and graduate institution; GRE scores on verbal, quantitative, and analytic sections for internship-option students (applicants may substitute LSAT and GMAT scores); a one-page statement providing evidence of ability to complete graduate work (career-option applicants); a three- to five-page essay stating the applicant’s goals and objectives; a nonrefundable application fee (see Admissions in the General Information chapter of this catalog); three letters of recommendation (at least one should be academic); a current résumé; a sample of written work (academic work is preferred); and Test of English as a Foreign Language scores (international applicants). A program graduate or a faculty member may be assigned to interview applicants. Internship-option applicants must submit all application materials by January 15 to be considered for graduate fellowships; otherwise the deadline is February 1. Career-option applicants are considered for fall and spring admission. Application deadlines are July 1 for fall and November 15 for spring.

Submit your application online at www.grad.ku.edu/GAPC. Send transcripts of all completed college and university course work to

The University of Kansas
Graduate Application Processing Center
Strong Hall, 1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

Send all other requested application materials to

The University of Kansas
Department of Public Administration, Attn: M.P.A. Admissions
Blake Hall, 1541 Lilac Lane, Room 318
Lawrence, KS 66044-3177

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 for taking two elective courses.

All students must pass a written final examination to complete the requirements for the M.P.A. degree. The time limit for earning the degree is seven years.

M.P.A./J.D. Combined Program. The joint degree program is designed for the student who intends to combine career preparation in law and public administration. Examples of career objectives for this degree are the practice of law in communities (for example, a city attorney, who may be called upon to perform legal services for a municipality) and for city managers (who may need to deal with legal questions and interact with legal professionals). The program combines into four years the normal three-year J.D. program offered by the School of Law and the two-year M.P.A. program offered by the Department of Public Administration. Students must complete 115 total credit hours: 78 credit hours in the School of Law (42 required and 36 elective), 25 hours in the Department of Public Administration, and 12 hours of electives of which only 6 hours may be law courses.

Of the 25 required hours in public administration, 6 hours are earned during the internship in the fourth year. The internship may not be taken concurrently with course work. At the conclusion of the internship year, each candidate must successfully pass a final written examination administered by public administration. The J.D. degree is awarded at the completion of the total required credit hours other than those associated with the internship. The M.P.A. degree is awarded upon successful completion of the internship and final examination. All course work counted toward any master’s degree requires a B average for the award of the degree. Specifically, students should understand that if they elect 6 or fewer hours of law requirements, the grades received in those law courses are incorporated into the M.P.A. grade-point average, which must be 3.0 for the award of the M.P.A.

For admission a student must meet requirements of both programs. Dual admission involves submitting separate sets of application materials as required by the respective programs. The M.P.A./J.D. program is open to those who have earned baccalaureate degrees and whose undergraduate academic records indicate that they have the capacity to complete these programs.

The M.P.A. program is available at three locations: Lawrence, the KU Public Management Center in Topeka, and the KU Edwards Campus in Overland Park.
ial, (3) two-page statement of goals and research interests including evidence of research aptitude/interest, (4) three letters of recommendation preferably from faculty members who can comment on the applicant’s potential for doctoral study, (5) nonrefundable application fee (see Admissions in the General Information chapter of this catalog), and (6) one official transcript from each college or university attended. In addition, international students must submit Test of English as a Foreign Language scores from an examination administered no more than two years before the date of application. Immigration requirements and a financial statement are available from the Office of International Student and Scholar Services, www2.ku.edu/~issfacts. All materials must be received before the application for admission can be considered.

For full admission and financial aid, the application file must be completed by February 1. Applicants who do not meet this deadline are unlikely to be considered for financial aid, even though applications may be considered throughout the year.

Submit your application online at wwwgraduate.ku.edu/GAPC. Send transcripts of all completed college and university course work to

The University of Kansas
Graduate Application Processing Center
Strong Hall, 1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

Send all other requested application materials to

The University of Kansas
Department of Public Administration, Attn: Doctoral Admissions
Blake Hall, 1541 Lilac Lane, Room 318
Lawrence, KS 66044-3177

Degree Requirements and Fields of Study. The Ph.D. program requires a minimum of 66 credit hours of courses, including up to 30 hours earned completing the M.P.A. degree or its equivalent, plus a minimum of 9 hours for the dissertation, for a total of 75 credit hours. (An applicant with a KU M.P.A. may apply 30 hours toward the 75-hour course work requirement.)

All students who enter the Ph.D. program must already have completed the core curriculum (eight courses) for the KU M.P.A. degree or the equivalent at another university, or they must take the appropriate courses after entering the program.

The requirements for the Ph.D. are based on formal course work and independent study in several fields:

- Foundations of Public Administration
- Specialization Field Within Public Administration
- Cognate Field
- Methods Sequence

Foundations of Public Administration. Four of the five courses listed below are required of all doctoral students.

- PUAD 930, PUAD 931, and PUAD 932
- And either PUAD 943 or PUAD 949

Substitutions require the approval of the departmental coordinator of doctoral studies.

Public Administration Specialization. In consultation with the coordinator of doctoral studies, each student must develop a public administration specialization of at least three courses. Common specializations include budgeting, public finance, human resources management, public policy analysis and evaluation, public values and ethics, organizations and organization theory, public law and administration, and urban policy/politics and community building. Each has a basic course that is regularly taught in the present graduate curriculum at the 800 level, and it is presumed that at least an additional course would come from an independent study. A third course could come from the department or could be taken outside. Potential cooperating units include the Departments of Political Science, Communication Studies, and Economics, and the Schools of Education and Business. Additional subfield specializations are available in consultation with faculty.

Cognate Fields. The degree requires a cognate field in addition to the public administration specialization. The cognate field is a subfield in economics, political science, education administration, etc., or a policy specialization (environmental policy, transportation policy, etc.) The cognate field’s sequence of three courses requires the approval of the departmental coordinator of doctoral studies and does not require a comprehensive examination.

Methods. The doctorate emphasizes the development of research skills. It requires PUAD 934 Research Methods in Public Administration, with the prerequisite PUAD 836 or its equivalent, and PUAD 935 Advanced Quantitative Methods for Public Administration. Students also are encouraged to take PUAD 937 Qualitative Methods in Public Administration. Substitutions require the approval of the departmental coordinator of doctoral studies. The methods requirement satisfies Option 1 of the Foreign Language or Other Research Skills Requirement.

To become a Ph.D. candidate, the student must complete a comprehensive oral examination. No student may attempt the comprehensive oral until he or she has satisfied requirements for the cognate field and passed the preliminary written examination in both the foundations and specialization fields. The doctoral coordinator certifies that the student has met these requirements.

After passing the comprehensive oral examination, the doctoral candidate must write a dissertation approved by a departmental dissertation committee and pass a final oral defense of the dissertation to qualify for the degree. If the aspirant receives a grade of unsatisfactory, the examination may be repeated, but under no circumstances may the student take it more than twice.

Public Administration Courses

Courses at the 800 level are primarily designed for M.P.A. students, but Ph.D. students may enroll with consent of the doctoral coordinator. Core M.P.A. courses are marked with an asterisk (*).

One course chosen from PUAD 824, PUAD 825, PUAD 826, PUAD 827, or PUAD 828 meets the policy requirement:

- PUAD 601 Crime and Punishment (3).
- PUAD 602 Diversity In Public Administration (3).
- PUAD 603 The Nonprofit Sector: Formation, Leadership, and Governance (3).
- PUAD 639 Concepts of Civil Society (3).
- PUAD 640 Public Service Leadership Practicum (3).
- PUAD 641 Public Service Leadership (3).
- PUAD 693 Directed Readings (1-3).
- PUAD 694 Topics in Public Administration: _____ (3).
- PUAD 695 Public Service Leadership Field Research Report (3).

*PUAD 824 Public Policy and Administration (3). An exploration of the ways in which public policy is made in the United States, focusing on the role of the administrator at each stage of the policy process: formulation, implementation, and evaluation. Various theories of policy-making with application to specific areas of public policy will be examined. LEC

*PUAD 825 Public Policy and Urban Administration (3). An exploration of policy development, implementation, and evaluation in the local government context. Various theories of the policy process and their application to municipal government are examined. (Same as POLS 825.) LEC

*PUAD 826 Public Policy and Administration of State Government (3). An examination of political and administrative aspects of state government focusing on legislative and executive branches of government. LEC

*PUAD 827 Health Care Policy and Administration (3). A seminar designed to explore the development of public health policy in the United States. Particular attention will be given to (1) the development of public institutions and policy goals; (2) current policy problems such as expenditure-cost controls, prospective reimbursement, utilization review, access, and public and private investment planning; and (3) administrative problems in the current health care system. (Same as HP&M 837.) LEC

*PUAD 828 Nonprofit Management and Policy (3). This course focuses on the economic, social, and legal foundations of the nonprofit sector. Nonprofits are examined in the context of a three-sector economy with emphasis on the ways in which nonprofits compensate for market failures and government failures. The course examines government-nonprofit relations in the modern welfare state and offers an in-depth examination of the health, education, and welfare functions as performed by nonprofits. This course also provides exposure to selected topics in nonprofit management such as grant writing, board relations, advocacy, fundraising, and volunteer management. LEC

*PUAD 830 Administrative Ethics (3). A survey of ethical issues faced by public administrators. Special attention will be given to ethical problems arising within hierarchical organizations and to the ethical implications of particular public policies. LEC
The 10-foot-tall, bronze-filigreed sculpture “Moses” stands before Smith Hall.

The academic study of religion acquaints the student with religion as a central phenomenon of human experience.
Public Administration • Religious Studies

PUAD 939 Topics in Public Administration:_____ (1-3). A study of selective topics in public administration. Course may be taken more than once. LEC

PUAD 943 Constitutional Foundations of Public Administration (3). This course provides grounding in the constitutional premises of public administration including executive, legislative, and judicial powers, and federalism, and those issues associated with the development of economic institutions and processes such as taxation, employment regulation, and commerce controls. LEC

PUAD 949 Law, Courts, and Public Policy (3). This course provides an in-depth analysis of the role of law, litigation, and courts in the public policy process, with an emphasis on bureaucratic institutions. The course covers the main theories and empirical research on the policy effects of litigation and intervention, with a particular focus on civil rights in the areas of employment, policing, welfare, prisons, and environmental policy. As part of the course requirements, students will conduct original empirical research. LEC

PUAD 990 Research Practicum in Public Policy and Administration (3). This course will provide students with an opportunity to conduct applied research in a field setting with faculty guidance. May be pursued as an independent study or as a regularly scheduled class with a group of students. Prerequisite: PUAD 934 and PUAD 935. RSH

PUAD 998 Directed Reading on Public Administration (1-6). Designed to meet the needs of graduate students whose study in public administration cannot be met with present course. Prerequisite: consent of instructor. RSH

PUAD 999 Directed Reading (1-15). Enrollment for writing doctoral dissertations. THE

Religious Studies

Chair: Daniel Stevenson
Graduate Adviser: Paul Mirecki
Smith Hall, 1300 Oread Ave., Room 109A
Lawrence, KS 66045-7615
www.2ku.edu/~rstudies, (785) 864-4663
Professors: Miller, Minor
Professor Emeritus: Breslauer
Associate Professors: Mirecki, Shelton, Stevenson
Associate Professor Emeritus: Macauley
Assistant Professors: Dolgopolski, Lindsey, Rausch, Zogry
Lecturers: Beeson, Keller, Klaus, Nanos, Wright, Zimdars-Swartz

The academic study of religion acquaints the student with religion as a central phenomenon of human experience; examines the forms in which religious experience has been described, organized, and practiced in history and in varying cultures; analyzes the interaction of religion with cultural institutions and personal and group experience; focuses on religion as an expression of meanings and values in the context of what is perceived as ultimate; and introduces the student to the methods appropriate to the objective study of religion.

The department offers a graduate program leading to the M.A. with a major in religious studies. The program enables students to pursue specialized advanced work that builds on previous general background in religious studies. At all levels, interdepartmental and interdisciplinary cooperation is encouraged as important to a comprehensive program. Continuing research in religious studies is an indispensable and foundational element, intimately related both to teaching and to the wider exchange and advancement of knowledge.

A library of some 14,000 volumes, owned by the Friends of the Department of Religious Studies at the University of Kansas, is housed with and used by the department in Irma I. Smith Hall.

Admission

An applicant is expected to have taken at least four undergraduate courses in religious studies, of which one must be in bibli- cal studies, one in the history of religious institutions and movements, and one in religious thought. At least one of the four courses must be in religion not associated with the Hebrew Bible. Students with undergraduate deficiencies must take course work to make them up at the rate of at least two courses per semester, passing each with a grade of B or higher, until the requirement has been fulfilled. Such course work does not count toward the total hours required for the M.A.

The department does not require Graduate Record Examination scores for admission or awards if the applicant’s undergraduate grade-point average is 3.0 or higher on a 4.0 scale. It does urge all applicants to take the appropriate sections of the GRE. An applicant whose undergraduate grade-point average is below 3.0 must submit official results of the GRE aptitude test to complete his or her applications. Those applying for university awards and funding must submit official results of the GRE aptitude test.

Send your application online at www.graduate.ku.edu/GAPC.

Competence

Competence represents an ability to command a broad general knowledge of a field in religious studies. Students are expected to have a wide understanding of the basic facts, methodological issues, and history of research in the competence area. Students may wish to focus more narrowly on some aspect of that area for the thesis project or for later research. The department permits students to be examined for competence in one of the following areas:

- Indigenous religions
- Islamic studies
- Jewish studies
- Religion in the Ancient Near East and Mediterranean
- Religion in Asia
- Religion in the U.S.A.
- Religious ethics
- Theories and methods of studying religion

M.A. Degree Requirements

M.A. Thesis Degree Requirements. The thesis program in religious studies leads toward the M.A. and consists of three interrelated but distinct elements.

1. A candidate for this degree must complete 30 graduate credit hours with the following stipulations:

(a) At least 18 credit hours must be in courses in religious studies and the rest in fields related to a declared competence.

(b) Course work must include at least 12 hours (four courses) in the declared competence.

(c) Immediately upon completion of 12 hours of course work, a student must, in consultation with an adviser, declare a competence in which an examination eventually will be taken. The student and the adviser must determine whether the student is pursuing a thesis or a nonthesis option. The student and the adviser plan the remaining course work with the declared competence in mind and propose a program and supervisory committee to the committee on graduate studies for approval. At this point, the supervisory committee determines the need for special competence in languages or research skills appropriate for the declared competence. If the student wishes to declare a new competence, the change may be permitted but is likely to require additional courses relevant to the new area and additional linguistic or research skills.

(d) Each student must complete REL 601 Approaches to the Study of Religion the first year in the program.

(e) Each student must complete REL 780 Seminar in Theories of Religious Experience or REL 781 Seminar in Theories of Religion. The student should complete the prerequisite 12 hours of undergraduate courses in religious studies before taking REL 601, REL 780, or REL 781.

(f) Each student must complete one course from each of these groups:

A. Western Religious Traditions

REL 512 Prophecy, Poetry, and Story in the Hebrew Bible (Old Testament)
REL 515 Studies in Early Christian Literature and History
REL 525 Jews and Christians in Greco-Roman Antiquity
REL 526 Jewish History and Literature in the Greek and Roman Periods
REL 530 Christian Origins: From the Beginnings to Augustine
REL 531 Studies in Christianity
REL 532 Studies in Islam
REL 535/AAS 542 The History of Islam in Africa
REL 539 Greek and Roman Religion

Send all other requested application materials to

The University of Kansas
Graduate Application Processing Center
Strong Hall, 1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

The University of Kansas
Department of Religious Studies
Smith Hall, 1300 Oread Ave., Room 109A
Lawrence, KS 66045-7615

Graduate Adviser: Paul Mirecki

The University of Kansas
Graduate Catalog
# Religious Studies Courses

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<thead>
<tr>
<th>Course Number</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>REL 500</td>
<td>Readings in Non-English Religious Texts</td>
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<tr>
<td>REL 504</td>
<td>Millenarian Movements</td>
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<tr>
<td>REL 507</td>
<td>Religion in India</td>
<td>(3)</td>
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<tr>
<td>REL 508</td>
<td>Religion in China</td>
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<tr>
<td>REL 509</td>
<td>Religion in Japan</td>
<td>(3)</td>
</tr>
<tr>
<td>REL 512</td>
<td>Prophecy, Poetry, and Story in the Hebrew Bible (Old Testament)</td>
<td>(3)</td>
</tr>
<tr>
<td>REL 515</td>
<td>Studies in Early Christian Literature and History</td>
<td>(3)</td>
</tr>
<tr>
<td>REL 523</td>
<td>The Dead Sea Scrolls</td>
<td>(3)</td>
</tr>
<tr>
<td>REL 524</td>
<td>Studies in Ancient Egyptian Culture and Religion</td>
<td>(3)</td>
</tr>
<tr>
<td>REL 525</td>
<td>Jews and Christians in Greco-Roman Antiquity</td>
<td>(3)</td>
</tr>
<tr>
<td>REL 526</td>
<td>Jewish History and Literature in the Greek and Roman Periods</td>
<td>(3)</td>
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<tr>
<td>REL 530</td>
<td>Christian Origins: From the Beginnings to Augustine</td>
<td>(3)</td>
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<tr>
<td>REL 531</td>
<td>Studies in Christianity</td>
<td>(3)</td>
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<td>REL 532</td>
<td>Studies in Islam</td>
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<td>REL 534</td>
<td>Studies in Rituals</td>
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<tr>
<td>REL 535</td>
<td>The History of Islam in Africa</td>
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<td>REL 539</td>
<td>Greek and Roman Religion</td>
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<td>REL 552</td>
<td>Classical Islamic Literature</td>
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</tr>
<tr>
<td>REL 558</td>
<td>Religion in Britain Since the Reformation: A Survey</td>
<td>(3)</td>
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<tr>
<td>REL 559</td>
<td>Religion in Britain Since the Reformation: A Survey, Honors</td>
<td>(3)</td>
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<tr>
<td>REL 560</td>
<td>Classical and Contemporary Jewish Thought</td>
<td>(3)</td>
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<tr>
<td>REL 570</td>
<td>Studies in Judaism</td>
<td>(3)</td>
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<tr>
<td>REL 580</td>
<td>Religious Perspectives on Illness, Health, and Healing</td>
<td>(3)</td>
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<tr>
<td>REL 581</td>
<td>Psychology of Religion</td>
<td>(3)</td>
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<tr>
<td>REL 585</td>
<td>New Religious Movements (Western)</td>
<td>(3)</td>
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<tr>
<td>REL 586</td>
<td>New Religious Movements (Non-Western)</td>
<td>(3)</td>
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<tr>
<td>REL 601</td>
<td>Approaches to the Study of Religion</td>
<td>(3)</td>
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<tr>
<td>REL 602</td>
<td>Special Topics in Religion</td>
<td>(1-4)</td>
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<tr>
<td>REL 604</td>
<td>Religion and Political Theory</td>
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<td>REL 650</td>
<td>Sufism</td>
<td>(3)</td>
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<tr>
<td>REL 657</td>
<td>Gender in Islam and Society</td>
<td>(3)</td>
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<tr>
<td>REL 665</td>
<td>Religious Ethics</td>
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<tr>
<td>REL 667</td>
<td>Religious Perspectives on War and Peace</td>
<td>(3)</td>
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<td>REL 669</td>
<td>Human Conflict and Peace</td>
<td>(3)</td>
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<td>REL 671</td>
<td>American Communism</td>
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<td>REL 672</td>
<td>Mother as Religious Metaphor</td>
<td>(3)</td>
</tr>
<tr>
<td>REL 677</td>
<td>Women in Christianity</td>
<td>(3)</td>
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<tr>
<td>REL 732</td>
<td>Seminar in Western Religious Texts</td>
<td>(3)</td>
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<tr>
<td>REL 733</td>
<td>Seminar in Eastern Religious Texts</td>
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<tr>
<td>REL 734</td>
<td>Studies in Ritual:</td>
<td>(3)</td>
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<tr>
<td>REL 735</td>
<td>The Dead Sea Scrolls</td>
<td>(3)</td>
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<tr>
<td>REL 736</td>
<td>Seminar in Western Religious Thought</td>
<td>(3)</td>
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<tr>
<td>REL 737</td>
<td>Seminar in Eastern Religious Thought</td>
<td>(3)</td>
</tr>
<tr>
<td>REL 738</td>
<td>Seminar in Religious and Society in Asia</td>
<td>(3)</td>
</tr>
<tr>
<td>REL 772</td>
<td>Seminar in Religion and Modern Social Criticism</td>
<td>(3)</td>
</tr>
<tr>
<td>REL 776</td>
<td>Seminar in Religion and Society</td>
<td>(3)</td>
</tr>
<tr>
<td>REL 777</td>
<td>Seminar in Religion and Society in Asia</td>
<td>(3)</td>
</tr>
<tr>
<td>REL 778</td>
<td>Seminar in Theories of Religious Experience</td>
<td>(3)</td>
</tr>
<tr>
<td>REL 780</td>
<td>Topics in the History and Literature of Religion</td>
<td>(3)</td>
</tr>
<tr>
<td>REL 800</td>
<td>Readings</td>
<td>(1-4)</td>
</tr>
</tbody>
</table>

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Graduate Catalog

Religious Studies • Russian, East European, & Eurasian Studies

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 the Schedule of Classes, in Asian, Middle Eastern, and Western religious thought, mysticism, and religious ethics. Course may be taken more than once if subject matter varies sufficiently. Prerequisite: Permission of instructor. LEC.

REL 875 Topics in Religion and Society: _____ (3). Special topics to be announced in the Schedule of Classes, according to research interests of faculty and students. A particular aspect of the study of religion and culture will be emphasized. Course may be taken more than once if the subject matter varies. Prerequisite: Permission of instructor. LEC.

REL 877 Topics in Women and Religion: _____ (3). Selected studies, as announced in the Schedule of Classes, in the history and analysis of symbols, images, scriptures, rites, and teachings defining women's roles in various religious traditions. Course may be taken more than once if the subject matter varies sufficiently. Prerequisite: Permission of instructor. LEC.

REL 899 Thesis (1-3). THE.

Russian, East European, and Eurasian Studies

Chair: Erik Herron, crees@ku.edu
Bailey Hall, 1440 Jayhawk Blvd., Room 320
Lawrence, KS 66045-7574, www.crees.ku.edu, (785) 864-4236
Graduate Adviser: Ray Finch, 310 Bailey Hall, (785) 864-4248
Professors: Alexander, Boyarin, Carlson, Clowes, Crawford, D'Anieri, DeGeorge, Dienes, El-Hodiri, Francisco, Gottlieb, Greenberg, Houston, Lesnikowski, Levin, Mikkelson, Parker, Rankin, Saul, Wilson
Professors Emeriti: Cinciala, Greaves, Maurer, Piekkikiewicz, Stammier, Stokstad
Associate Professors: Basow, Christilles, Comer, Dickey, Earnhart, Hanley, Herron, Najafizadeh, O’Lear, Phipps, Volek
Assistant Professors: Ivanov, L’Heureux, Radovanovic, Rausch, Sabbag, Skiba, A. Tsiovkh, Y. Tsiovkh, Vassileva-Karagyozova, Weaver, Wood
Librarians: Guiillian, Haines, Husic, Rosenblum

Admission

Most applicants hold B.A. degrees in the social sciences or humanities with grade-point averages of 3.0 or higher. Students with B.S. or professional degrees are also eligible to apply. Some students may consider completing the M.A. degree in conjunction with academic or professional study in another department or school. Students should submit the following application materials:

• Graduate application for admission.

• A nonrefundable application fee (check payable to the University of Kansas; see Admissions in the General Information chapter of this catalog).

• One original transcript of all college-level work.

• Graduate Record Examination scores. International students should submit Test of English as a Foreign Language scores.

• Three letters of recommendation commenting on the student’s ability to succeed at graduate work.

• 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 at www.graduate.ku.edu/GAPC. Send the application (paper or online), application fee, GRE scores, and official transcripts to:

The University of Kansas
Graduate Application Processing Center
Strong Hall, 1440 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

Send all other requested application materials to:

The University of Kansas
Russian, East European, and Eurasian Studies
Bailey Hall, 1440 Jayhawk Blvd., Room 320
Lawrence, KS 66045-7574

M.A. Degree Requirements

A Master of Arts degree is awarded 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 another approved language materials. Before enrolling for REES 899, a student must have completed a total of 22 semester credit hours (three years), or the equivalent, of the target language.

Course Groupings

I. Literature and the Arts

II. History

III. Political Science

IV. Philosophy and Religion

V. Economics, Business, and Geography

Every graduate degree candidate must pass a comprehensive examination, in addition to the regular course examinations, by the final date for meeting general degree requirements.

Information about opportunities and requirements for graduate work with a Russian or Eastern European concentration in any department of the university may be obtained from the department.

Requirements may be modified in special cases with the director’s approval, particularly for students with special needs such as Experienced Teacher Fellows, Foreign Area Officers, or candidates for degrees in the professional schools. All students are encouraged to study abroad.

Russian, East European, and Eurasian Studies Courses

REES 510 Understanding Central Asia (3).

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 courses are taught by faculty members in many areas of the university.

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.
The Center for Russian, East European, and Eurasian Studies is one of the nation’s 16 comprehensive Title VI National Resource Centers for the study of Russia, Ukraine, East Central Europe, and the Balkans.

Language and area studies in Russian and Polish are available.
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
- Detailed knowledge of the history and development of one Slavic language
- Oral and written competence in the student’s major Slavic language
- A general knowledge of the history of its literature
- About 9 to 12 graduate semester credit hours in a minor subject, taken either from outside or inside the department
- An acceptable dissertation

Requirements for Concentration in Linguistics
- Detailed knowledge of the structure and history of two Slavic languages, one of which is considered the student’s major language, plus reading competence in at least one additional Slavic language
- Oral and written competence in the student’s major Slavic language
- About 10 to 12 graduate semester credit hours in a minor subject, taken either from outside or inside the department
- Basic knowledge of general linguistics and comparative Slavic linguistics
- 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 candidacy 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 FLORS 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 six-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
RUSS 504 Advanced Russian I (3).
RUSS 508 Advanced Russian II (3).
RUSS 512 Russian for the Professions I (3).
RUSS 516 Russian for the Professions II (3).
RUSS 522 Problems in Translating Russian into English I (3).
RUSS 526 Problems in Translating Russian into English II (3).
RUSS 550 Advanced Conversation, Composition, and Grammar in Russia: Summer Program (6).
RUSS 552 Advanced Russian Language at Saint Petersburg University: Semester Program (14).
RUSS 600 Classics of Russian Culture (3).
RUSS 604 Contemporary Russian Culture (3).
RUSS 608 Russian Phonetics and Grammar (3).
RUSS 612 Introduction to Russian Literature (3).
RUSS 616 Stylistics (3).
RUSS 675 Readings in Russian (1-6).

Slavic Languages and Literatures Courses
SLAV 500 Russia Today (3).
SLAV 502 Introduction to Russian Culture and Society: _____ (3).
SLAV 503 Post-Soviet Communication (3).
SLAV 504 Introduction to East-Central European Culture and Society: _____ (3).
SLAV 505 Introduction to Czech Culture (5).
SLAV 506 Polish Literature and Civilization (3).
SLAV 508 South Slavic Literature and Civilization (3).
SLAV 510 The Russian Literary Genius (3).
SLAV 512 Siberia Yesterday and Today (3).
SLAV 514 Totalitarianism and Literature in Central Europe (3).
SLAV 516 Film Adaptations of Polish and Czech Literature (3).
SLAV 520 Russian Phonetics, Phonology, and Infectional 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 (5).
SLAV 534 Tolstoy (3).
SLAV 536 Turgenev (3).
SLAV 538 The Modern Polish Short Story (3).
SLAV 540 Language and Identity in East-Central Europe and the Former Soviet Union (3).
SLAV 560 Introduction to Slavic Language: _____ (3).
SLAV 561 Readings in Slavic Language: _____ (1-6).
SLAV 562 Russian Theatre and Drama from Stanislavski and Chekhov to the Present (3).
SLAV 564 The “Woman Question” in 19th-century Russian Literature (3).
SLAV 566 The Devil in Russian Literature (3).
SLAV 568 Biblical Themes in Modern Russian Literature (3).
SLAV 600 Biography of a City: _____ (2-4).
SLAV 612 Introduction to Russian Literature of the 19th Century (3).
SLAV 614 Russian Literature in Translation: _____ (3).
SLAV 616 Introduction to Russian Literature of the 20th Century (3).
SLAV 630 Slavic Folklore (3).
SLAV 635 Language, Culture, and Ethnicity in Prehistoric Eastern Europe (3).
SLAV 642 Pushkin and Evgenij Onegin (3).
SLAV 650 The Russian Short Story (5).
SLAV 656 Russian Literature of the 18th Century (3).
SLAV 660 Nineteenth-century Russian Prose and Fiction (3).
SLAV 662 Russian Literary Modernism: 1880-1930 (3).
SLAV 667 Post-Soviet Literature (3).
SLAV 668 Nabokov (3).
SLAV 678 Readings in Slavic Linguistics (1-6).
SLAV 679 Topics in: _____ (1-6).
SLAV 684 Main Currents of Russian Thought I (3).
SLAV 686 Main Currents of Russian Thought II (3).
SLAV 710 Introduction to Slavic Languages and Linguistics (3). The Slavic languages and peoples, including briefly: their origin, prehistory, and early culture. Basic linguistic methodology as applied to Slavic material from the beginnings of Slavic linguistics to the present. LEC
SLAV 711 Russian Poetry: Nineteenth Century (3). Readings from the works of the major poets, in Russian. Prerequisites: 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 18th and 19th Century (3). A study of the various literary periods, such as sentimentalism, romanticism, naturalism, realism, with particular reference to individual literary critics and critical journals. LEC

SLAV 719 Philosophical and Aesthetic Thought of the Russian Silver Age (3). A survey of the works of Solovyov, Florensky, Berdiaev, 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 the Symbolist writers, Andrei Bely and Aleksandr Blok. Readings in Russian. LEC

SLAV 728 Nineteenth-century Russian Prose (3). Readings from the works of Turgenev, Chekhov, Leskov, Saltovky, and others. Readings and discussion in English. Russian majors will be expected to read some works in Russian. No prerequisite. LEC

SLAV 730 Russian Language and Literature (3). A study of representative works in all genres, by Russian émigré writers. Readings in English. LEC

SLAV 740 Bibliography and Methods (3). An introduction to the technical problems of literary and philosophical research in the field of Russian studies. LEC

SLAV 748 Old Church Slavic (3). A course in the first written language of the Slavs (9-12th 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 the 12th 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). Synchronous study of the contemporary Russian language with special emphasis on problems of functional morphology and syntax. Prerequisite: Three years of Russian language study or its equivalent. LEC

SLAV 799 M.A. Seminar in Slavic Linguistics (3). Topics in Slavic linguistics. Content will vary. May be repeated. LEC

SLAV 802 Thesis (1-6). THE

SLAV 804 Comparative Slavic Linguistics (3). An examination of the development of the Slavic languages from the Common Slavic period to the present, proceeding from Indo-European. Prerequisite: Graduate standing in Russian. LEC

SLAV 806 East Slavic Linguistics (3). An examination of the linguistic phenomena and historical development of the East Slavic languages (Russian, Belorussian, and Ukrainian). Prerequisite: Graduate standing in Russian. LEC

SLAV 808 West Slavic Linguistics (3). An examination of linguistic phenomena and historical development of the West Slavic languages (Polish, Czech, Slovak, and Upper and Lower Sorbian). LEC

SLAV 910 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 18th century. All readings in Russian. Prerequisite: Graduate standing in Russian. LEC

SLAV 824 Proseminar in Methods of Teaching Slavic Languages I (1-3). Required for all teaching assistants, assistant instructors engaged in the teaching of Slavic languages and persons planning for careers in teaching Slavic languages. Combines discussion of theoretical teaching concepts with practical solution of problems arising concurrently in Slavic language courses. Students enrolled for two or three hours will study advanced Slavic grammar topics and stylistics as they apply to the teaching of Slavic languages. LEC

SLAV 825 Investigation and Conference (1-3). Individual work in language or 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 Literatures, 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 899 Ph.D. Seminar Slavic Linguistics (3). Topics in Slavic linguistics. Content will vary. May be repeated. Prerequisite: Ph.D. student in Slavic Languages and Literatures. LEC

SLAV 912 Seminar Topics in Contemporary Slavic Linguistics (3). Synchronous examination of specific topics, i.e., phonology, morphology, syntax, and lexicology of several Slavic languages. LEC

SLAV 914 Seminar: Topics in Historical Slavic Linguistics (3). Diachronic 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, skazki, zagadki, etc. Prerequisite: SLAV 620. LEC

SLAV 940 Seminar: Topics in Comparative Slavic Literature (3). Prerequisite: Graduate standing in Slavic Languages and Literatures. LEC

SLAV 999 Dissertation (1-6). THE

■ Turkish Course

TURK 675 Readings in Turkish: (3).

■ Ukrainian Courses

UKRA 512 Intensive Ukrainian I (5).
UKRA 516 Intensive Ukrainian II (5).
UKRA 675 Readings in Ukrainian Language (1-6).

Sociology

Chair: William G. Staples, socdept@ku.edu
Graduate Adviser: Eric Hanley
Fraser Hall, 1415 Jayhawk Blvd., Room 716
Lawrence, KS 66045-7556
www.sociology.ku.edu, (785) 864-4111, fax: (785) 864-5280
Professors: Antonio, Ekerdt, Hill, Nagel, Smith, Sprague, Staples, Zimmerman
Associate Professors: Albrecht, Hanley, Mennerick, Najafizadeh
Adjunct Associate Professor: Rosenthal
Assistant Professors: Andac, Chong, Donovan, Golash-Boza, Kleykamp, LaPierre, Obadare, Weller

The department offers a full graduate program in sociology leading to the M.A. and Ph.D. degrees, educating sociologists for careers in teaching and research and for fields of practical application. It also contributes to professional education in such
fields as social welfare, social policy, architecture, education, journalism, personnel administration, business, and medicine. Aside from professional interests, the department offers instruction to assist students in deepening their understanding of social relations and, hence, of the social context of their own lives.

**Admission**

Prerequisites are 15 credit hours in sociology, a course in sociological theory, and a sociology course in statistics. Applications must include scores on the Graduate Record Examination aptitude tests. International applicants must submit scores on the GRE and either the Test of English as a Foreign Language or the academic format of the International English Language Testing System administered by the University of Cambridge ESOL Examinations. Applications also must include a statement of academic interests and professional goals, three recommendation rating forms and letters from individuals who can evaluate the applicant’s academic performance, one complete set of transcripts from all colleges and universities attended, a current résumé/curriculum vitae, a writing sample, and a nonrefundable application fee (see Admissions in the General Information chapter of this catalog). The applicant’s record should indicate considerable academic promise and a high level of motivation.

Submit your application online at [www.graduate.ku.edu/GAPC](http://www.graduate.ku.edu/GAPC).

Send transcripts of all completed college and university course work to

**The University of Kansas**

Graduate Application Processing Center

Strong Hall, 1450 Jayhawk Blvd., Room 313

Lawrence, KS 66045-7535

Send all other requested application materials to

**The University of Kansas**

Department of Sociology

Fraser Hall, 1415 Jayhawk Blvd., Room 716

Lawrence, KS 66045-7556

**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.

**Nonthesis—Course Work Option.** Students must complete 36 hours of graduate credit (excluding any credit given for thesis and including the courses specified above under the thesis option) and a final oral examination over course work in sociology. Completion of these requirements leads to the M.A. degree but does not allow the student to proceed to doctoral study.

**Ph.D. Degree Requirements**

Regular admission to the doctoral program requires the M.A. degree with a major in sociology or a closely related field and evidence of scholarly accomplishment and capability equivalent to that demonstrated in an M.A. thesis or research paper (described above) in sociology. To receive the Ph.D. with a major in sociology, the student must

1. Obtain admission to the Ph.D. program.
2. Complete SOC 990 Ph.D. Proseminar unless SOC 790 M.A. Proseminar has been completed.
3. Carry out a program of study developed, initially, with a member of the graduate studies committee and, as soon as possible, with a doctoral advisory committee.
4. Attain the requisite levels of competence in the history and theory of sociology and in methods of sociological research by taking 9 hours of approved graduate courses in theory and completion of SOC 811 Sociological Research, SOC 812 Analytic Methods in Sociology, and one other graduate-level sociology methods course with an average grade of 3.0.
5. Complete the Foreign Language or Other Research Skills (FLORS) requirement, which may be satisfied by completion of three sociological methods courses as specified in 4 above. Additional information about the FLORS requirement can be found under Research Skills, Doctoral Degree Requirements in the General Information chapter of this catalog.
6. Pass two written examinations in special fields in sociology or related disciplines.
7. Complete three full academic years, or the *bona fide* equivalent, in study at this or another approved university, including time spent attaining the master’s.
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.

**Manual of Graduate Study in Sociology**

A more detailed account of advising procedures, degree requirements, and program options is set forth in the department’s *Manual of Graduate Study in Sociology*, which is sent with the application for admission to the program or given to anyone on request.

**Sociology Courses**

- SOC 500 Sociological Theory (3).
- SOC 510 Elementary Statistics and Data Analysis (3).
- SOC 515 Applied Sociology (3).
- SOC 520 Groups and Associations (3).
- SOC 521 Wealth, Power, and Inequality (3).
- SOC 522 American Racial and Ethnic Relations (3).
- SOC 523 Sociology of Aging and the Life Course (3).
- SOC 524 Sociology of the Economy (3).
- SOC 525 Sociology of Work (3).
- SOC 526 Industrial Sociology (3).
- SOC 530 Industrial Revolution and Capitalist Development (3).
- SOC 531 Global Social Change (3).
- SOC 532 Sociology of the Middle East (3).
- SOC 533 Industrialization in Developing Nations (3).
- SOC 534 Comparative Racial and Ethnic Relations (3).
- SOC 535 Gender in the Global Context (3).
- SOC 536 Ethnicity in the United States: _____ (3).
- SOC 560 Law and Criminal Justice (3).
- SOC 561 Sociology of Deviance (3).
- SOC 562 Sociology of Law (3).
- SOC 570 Social Conflict (3).
- SOC 571 Collective Behavior (3).
Sociology

SOC 572 Dispute Settlement (3).
SOC 573 Sociology of Violence (3).
SOC 598 Practicum in Crime and Delinquency Studies (3-6).
SOC 600 Sociological Perspectives: (3).
SOC 601 Introduction to Feminist Social Theory (3).
SOC 610 Survey Research (3).
SOC 615 Techniques of Demographic Analysis (4).
SOC 617 Women and Health Care (3).
SOC 618 The Sociology of Pharmacy (3).
SOC 619 Political Sociology (3).
SOC 620 Social Organization (3).
SOC 621 Cross-cultural Sociology (3).
SOC 622 Sociology of Science (3).
SOC 623 Women and Work (3).
SOC 624 Sociology of Health and Medicine (3).
SOC 625 Work Roles in Health and Medicine (3).
SOC 626 Religion and Society (3).
SOC 627 School and Society (3).
SOC 628 Sociology of the Family (3).
SOC 629 Sociology of Sport (3).
SOC 630 Latin American Society (3).
SOC 633 Traditional Rural China and the Communist Revolution (3).
SOC 634 The Sociology of Culture (3).
SOC 660 Sociology of Mental Illness (3).
SOC 661 Causation of Crime and Delinquency (3).
SOC 662 Corrections (3).
SOC 671 Social Movements (3).
SOC 672 Sociology of War and Peace (3).
SOC 698 Individual Undergraduate Research (1-12).
SOC 707 Seminar in Historical Sociology (1-4). Each seminar will explore problems at the intersection of sociology and history. Topic, instructors, and hours of credit will be announced in the Schedule of Classes. Seminars will be offered by different instructors on different topics and may take more than one topic. No prerequisite. LEC
SOC 722 Sociology of Gender (3). This course will offer a range of sociological perspectives on the role of gender in society. The particular substantive focus will vary each semester to allow flexibility for in-depth analysis of gender relationships in such areas as politics, health and aging, and work. LEC
SOC 760 Social Inequality (3). A comprehensive review of the major theoretical and empirical approaches used in the study of institutionalized social inequality. Reference to the origins, forms, cultural and structural variations and their changes over time, consequences and ideologies of social inequality. Prerequisite: A distribution course in sociology. LEC
SOC 762 Seminar in Social Deviation and Control: (3). Advanced study of theory and practice relating to deviation. May be repeated as topics vary. Prereq: SOC 662 or SOC 661. LEC
SOC 767 Gerontology Proseminar (3). A proseminar coordinated by the Gerontology Center. The proseminar explores essential areas of gerontology for researchers and practitioners, providing a multidisciplinary (psychology, biology, sociology, and communication) perspective on aging. The proseminar surveys contemporary basic and applied research, service modernity, and policy and management issues in gerontology. (Same as ASCB 787, AMS 787, COMS 787, and PSYC 787.) (Formerly HDEF 787.) LEC
SOC 770 Social Systems and Social Change in the United States (3). Analysis of approaches to the study of sociocultural change in America, with special emphasis on a systems perspective. Seniors by consent of instructor. LEC
SOC 771 Intergroup Relations and Conflict in American Society (3). Analysis of the dynamics of intergroup relations (e.g., class, religious, ethnic, racial, political) in America with special emphasis on the examination of major theoretical and empirical approaches employed in the study of societal conflict and consensus. LEC
SOC 780 Advanced Topics in Sociology: (3). Topics vary from semester to semester and instructor to instructor to allow flexibility for in-depth analysis of particular topics. LEC
SOC 790 M.A. Proseminar (3). Introduction to major disciplinary issues, departmental research specialties, faculty research interests, interdisciplinary connections, funding sources, and professional writing. Required of M.A. students entering the graduate program in sociology. May not be taken by those who have credit for SOC 960. Students must have completed 60 credits. Graded on a satisfactory/unsatisfactory basis. LEC
SOC 801 The Rise of Social Theory (3). This is a less a survey of intellectual history than an effort to trace the “preclassical” roots of sociological theory. We explore the rise of paradigmatic concerns in the writings of such key figures as Aristotle, Marsilius of Padua, Martin Luther, Etienne de la Boétie, Michel de Montaigne, Charles de Montesquieu, Jean-Jacques Rousseau, Immanuel Kant, G.W.F. Hegel, Floris Tristan, and Ludwig Feuerbach, among others. LEC
SOC 802 Modern Social Theory (3). This seminar will focus on the later 19th- and early 20th-century “theories of society,” addressing the origins and developmental tendency of modernity and their relation to premodern social order. Primary texts of the major theorists (e.g., Marx, Durkheim, Nietzsche, Weber, Simmel, and Mead) will be studied in historical context. The tradition’s analytical and critical resources and problematic features will also be explored. Finally, the connections between tradition and contemporary sociological approaches will be explored. LEC
SOC 803 Issues in Contemporary Theory: (3). A critical examination of recent trends and debates in sociological theory. This is a thematically oriented course in which classic as well as contemporary views will be explored. Attention will be di-
rected to both formal and informal theories, and sociological methods and criticism. Prerequisites: A distribution course in sociology. LEC
SOC 804 Sociology of Knowledge (3). This course reviews the major sociological approaches to the study of the relationship between thought and the social context within which it arises. A central concern is an examination of the relationship be-
 tween ideology and social structures, particularly as expressed in the construction of official knowledge. LEC
SOC 808 Feminist Theories (3). This course will explore and evaluate accounts of social structure, social processes, and consciousness developed in the feminist lit-
erature. No theoretical arguments, no (major) sociological developments, histori-
cal, materialist, psychoanalytic, cultural, and Black feminist theories. Some of the readings will focus on limitations and distortions within mainstream social the-
ory; others will center on the development of alternative social theory using the standpoint of women as a point of departure. LEC
SOC 811 Sociological Research (3). The use of the scientific method to study social phenomena including: the formulation and testing of hypotheses; techniques for collecting data; measuring social variables; interpreting research findings; the rela-
tionship of theory and facts. Prerequisite: A distribution course in sociology. LEC
SOC 812 Analytic Methods in Sociology (3). Consideration of quantitative meth-
ods of analysis including both parametric and non-parametric techniques. Prereq-
requisite: One course in statistics. LEC
SOC 813 Field Methods and Participant Observation (3-5). Will acquaint the stu-
dent both theoretically and empirically with the procedures and logics of the re-
search techniques employed by individuals or small research teams conducting qualitative fieldwork. Prerequisite: A distribution course in sociology. FLD
SOC 816 Health Services Research Methods: (3). This course will explore and evaluate research approaches to the study of the relationship between the health status and health needs of populations, and incorporating health services re-
search into organizational policy and decision-making. (Same as HP&M 821.) Prerequi-
t: 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 an-
alytic understanding of the organization, professional, and interpersonal behavior and the health status of populations, and incorporating health services research into organizational policy and decision-making. (Same as HP&M 821.) Prerequi-
t: PRE 710 or equivalent, HP&M 810 and HP&M 812 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, class, gender, urbanization, socioeconomic development, revolution, and relations with the U.S. Emphasis on socio-
logically different Latin American development. Prerequisite: A distribution course in soci-
ology or ANTH 108 or ANTH 308, plus junior-senior or graduate student standing. LEC
SOC 837 International Political Economy (3). Provides a broad survey of major de-
velopments in the field. Topics include the intellectual origins of international politi-
cal economy; the historical evolution of the international system; North-South and
Western trade, investment, and monetary relations; foreign aid, debt, technology
transfer, development, international economic institutions (e.g., International Mone-
tary Funds, World Bank, Multinational Corporations, etc.). (Same as POLS 973.) LEC
SOC 875 The Political Economy of Globalization (3). This course will acquaint stu-
dents with recent developments in the global economy, including its impact on po-
litical 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 develop-
ment. Topics covered include syllabus design, exam strategies and design, course de-
sign, content of and approaches to teaching introductory and other sociology courses, student grading and evaluation. Required of all teaching assistants assigned to courses in sociology. May not be repeated for credit toward graduate degree. LEC
SOC 899 Thesis (1-8). THE
SOC 900 Seminar on Special Topics in Theory: (1-4). Each seminar will explore problems of theory in sociology. Topic, instructor, and hours of credit will be announced in the Schedule of Classes. Seminars will be offered by different instructors on different topics, and consent may be required for 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 Schedule of Classes. Seminars will be offered by different instructors on different topics, and a student may take more than one topic. LEC

294 THE UNIVERSITY OF KANSAS 2007-2009
The department offers the M.A. degree with a concentration in literature or language/literature/culture.

**Admission**

1. The applicant must hold (or anticipate completing by the time of admission) a B.A. or B.S. degree from an accredited U.S. college or university or the equivalent degree from a foreign university, must have 15 semester hours of literature courses at the survey level or above in Spanish or the equivalent of the undergraduate major in Spanish at KU, and must have a minimum grade-point average of 3.0 on a 4.0 scale, both in Spanish and overall.
2. 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. (PORT 611 counts in this category.)
   - (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.

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**KU’s Department of Sociology offered the first course in the nation in the field now called women's studies.**

**KU’s doctoral program in Spanish ranked among the top five in the nation in a series of evaluations by the Conference Board of Associated Research Councils.**

**KU’s library collection on Central America is one of the top three in the nation.**
Admission
1. The applicant must hold (or anticipate completing by the time of admission) an M.A. or M.S. degree from an accredited U.S. college or university or the equivalent degree from a foreign university; must have a minimum grade-point average of 3.0 on a 4.0 scale, both in Spanish and overall; and must meet general requirements.
2. Strong consideration is given to letters of recommendation, breadth and depth of preparation, and Graduate Record Examination scores, if available.

Requirements. Once admitted, the aspirant must (1) present a reading knowledge of two foreign languages, other than Spanish, appropriate to the specialization; (2) complete all course work prescribed by the advisory committee (this course work is to include a minimum of five seminars, at least four at KU, and a guideline of a minimum of 24 hours in Hispanic literatures at KU beyond the 30 hours required for the M.A. degree); (3) present a minor in a field other than Spanish or Spanish-American literature; (4) complete a minimum of two semesters of quarter-time teaching or one semester of half-time teaching in the Department of Spanish and Portuguese; (5) pass a comprehensive examination, partly written and partly oral; and (6) write and defend a dissertation. See also the general requirements for the Doctor of Philosophy degree in the General Information chapter of this catalog.

Study Abroad
Graduate students have the opportunity to teach and conduct research during summer session in Puebla, Mexico; or Barcelona, Spain. The department also has a graduate exchange agreement with the University of Santiago de Compostela, Spain.

■ Portuguese Courses
PORT 509 Phonetics (2).
PORT 540 Textual Analysis and Critical Reading (3).
PORT 547 Brazilian Studies: (3).
PORT 548 Portuguese Language and Brazilian Culture for Business (3).
PORT 560 Survey of Portuguese Literature (3).
PORT 565 Studies in Brazilian Film: (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 cultural expressions and literature in the 20th century. Conducted in Portuguese. Prerequisite: PORT 216 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. RSH
PORT 785 Special Topics in Brazilian Cultural and Literary Studies: (3). Topics vary by semester. The course may be taken more than once, with full credit, provided there is no duplication in the material covered. Conducted in Portuguese. LEC
PORT 930 Seminar in Portuguese Literature: (1-3). LEC
PORT 970 Seminar in Brazilian Literature: (1-3). 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 etymological and lexical development of the Spanish language taught from Sabin 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 survey course in Spanish peninsular literature taught in Spanish. LEC
SPAN 730 Literature of 13th- and 14th-century Spain (3). A critical survey of representative works from 13th- and 14th-century Castile. Prerequisite: Survey course(s) in Spanish literature from its beginning through the present, or graduate standing. LEC
SPAN 733 Print Culture in Early Modern Spain (3). A study of the literature produced during the period of early printed books with emphasis on the diffusion of new literary forms during the 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 15th-century Castile (3). Survey of the poetry and prose of the 15th century with particular attention to the literature produced during the reign of the Catholic Kings. Prerequisite: Survey course in Spanish literature from its beginning through the present, or graduate standing. LEC
SPAN 739 Spanish Drama of the Golden Age (3). Selected plays of such authors as Lope de Vega, Alarcon, Tirso de Molina, Guillerain de Castro, Mira de Amescua, and Ruiz de Alarcon. Prerequisite: SPAN 739 or equivalent. LEC
SPAN 741 Calderon and His School (3). Intensive study of selected works by Calderon de la Barca, Rojas Zorrilla, and Agustin Moreno. Prerequisite: SPAN 739 or equivalent. LEC
SPAN 742 The Spanish Novel in the Renaissance and Golden Age (3). From the Celaestia 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 Quijote (3). Linguistic and literary study. Examination of traditional interpretations. The life and thought of Cervantes. Collateral readings. Prerequisite: A survey of Spanish literature through the Golden Age. LEC
SPAN 747 The Spanish Theatre before Lope de Vega (3). Prerequisite: A course in Spanish drama of the Golden Age. LEC
SPAN 752 Spanish Literature of the 18th Century (3). The neo-classic movement; the traditionalist reaction; the beginnings of Romanticism. Prerequisite: A survey course in Spanish literature from the 18th century to the present. LEC
SPAN 754 Romanticism (3). The development of the Romantic movement in Spain. Prerequisite: A survey course in Spanish literature from the 18th century to the present. LEC
SPAN 755 Nineteenth-century Spanish Novel (3). The rise and development of realism. Prerequisite: A survey course in Spanish literature from the 18th century to the present. LEC
SPAN 760 Nineteenth-century Spanish Drama (3). A survey of the main currents and figures of Spanish theatre from the 19th-century Classicism, Romanticism, Costumbirismo, Realismo (Alta Comedia), NeoRationalism, and the innovations of Galdos and Benavente. Prerequisite: A survey course in Spanish literature from the 18th century to the present. LEC
SPAN 761 Twentieth-century Spanish Drama (3). A survey of major plays and playwrights of 20th-century Spain with reference to critical theory of text as literature and performance. LEC
SPAN 762 The Spanish Novel Since the Civil War (3). A study of the major works and movements occurring since the Spanish Civil War. LEC
SPAN 764 Modern Spanish Poetry (3). Modern poetry of Spain, beginning with Becquer and ending with the “Generation of the 1920’s.” Close study of the works of the major poets; readings in poetic theory. Prerequisite: A general survey course of the literature of Spain of the 18th, 19th, and 20th 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 study of significant developments in the Spanish novel between 1898 and 1936. LEC
SPAN 770 Spanish-American Literature (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 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,聂里达, 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, Cuban Prose Fiction, Argentine Prose Fiction, Caribbean Prose Fiction, etc.) of Spanish American Prose Fiction from the beginning to the present, with emphasis on the 19th and 20th centuries. Course title will vary by country or region. Prerequisite: A survey course in Spanish American literature. LEC

SPAN 784 Spanish-American Modernism and Vanguards (3). A study of the poetry and/or prose of modernismo and the vanguard in Spanish America. Prerequisite: One course in Spanish American literature or permission of instructor. 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: Theory and Application to Teaching (3). An introduction to linguistics and applied linguistics focused on the phonology, morphology, and syntax of Spanish, including work in tagmatics and transformational grammar. Part of the course deals with problems of language instruction, testing, and use of the language laboratory. LEC

SPAN 792 The Picarosque Novel (3). A survey of the picarosque mode in Hispanic literature, and detailed analysis of selected texts. Prerequisite: A survey course in Spanish or Spanish American literature. LEC

SPAN 795 Literary Theory and Criticism (3). Systematic study of the development of theories of literature. Emphasis usually placed on 20th 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 802 Colloquium in Methods of Teaching Spanish Language (1). Combined discussion of theoretical teaching concepts and development of pedagogical materials with practical solutions to problems arising concurrently in Spanish language courses. Required for all GTAs teaching Spanish at the 100 and 200 levels. LEC

SPAN 817 Spanish Historical Grammar (3). A diachronic study of the syntax and morphology of Spanish from the 13th century to the present; sound change and orthography; evolution of literary styles. Prerequisite: A course in Spanish phonetics. LEC

SPAN 898 Investigation and Conference (1-10). Individually directed work to fill the student's needs not met by available organized courses. One to three hours of credit in any semester. Maximum total credit for the M.A. degree is three hours. May be taken with full credit as often as recommended by department. THE

SPAN 922 Seminar in Spanish Literature and Culture: (3). An intensive investigation of a particular topic in Spanish literature and culture; content will vary in terms of topics, genres, and time periods covered. The course may be taken more than once, with full credit provided there is no duplication. Prerequisite: Graduate standing. LEC

SPAN 940 Seminar in Trans-Atlantic Literatures and Cultures: (3). An intensive investigation of a particular topic in Spanish and Latin American literatures and cultures; content will vary in terms of topics, genres, and time periods covered. The course may be taken more than once, with full credit provided there is no duplication. Prerequisite: Graduate standing. SEM

SPAN 950 Seminar: Spanish Drama: (3). LEC

SPAN 952 Seminar: Spanish Novel: (3). LEC

SPAN 954 Seminar: Spanish Poetry: (3). LEC

SPAN 956 Seminar: Spanish Short Story: (3). LEC

SPAN 958 Seminar: Spanish Essay: (3). LEC

SPAN 961 Seminar: Medieval Literature: (3). LEC

SPAN 962 Seminar: Cervantes: (3). LEC

SPAN 970 Seminar: Spanish-American Drama: (3). LEC

SPAN 972 Seminar: Spanish-American Novel: (3). LEC

SPAN 974 Seminar: Spanish-American Poetry: (3). LEC

SPAN 976 Seminar: Spanish-American Short Story: (3). LEC

SPAN 978 Seminar: Spanish-American Essay: (3). LEC

SPAN 985 Seminar in Spanish-American Literature and Culture: (3). An intensive investigation of a particular topic in Spanish American Literatures and Cultures; content will vary in terms of topics, genres, and time periods covered. The course may be taken more than once, with full credit provided there is no duplication. Prerequisite: Graduate standing. SEM

SPAN 999 Dissertation (1-23). THE

Speech
See Communication Studies.

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

For Audiology courses, see Communicative Disorders: Intercampus Program in the School of Allied Health chapter. For Speech-Language Pathology courses, see Communicative Disorders: Intercampus Program in this chapter.

Systematics and Ecology
See Biological Sciences: Ecology and Evolutionary Biology.

Theatre and Film
Chair: John Staniuas, stanj@ku.edu
Director of Graduate Studies: Henry Bial, tflgs@ku.edu
Murphy Hall, 1530 Naismith Drive, Room 356
Lawrence, KS 66045-3102, www2.ku.edu/~kuthf, (785) 864-3511
Professors: Berg, Gronbeck-Tedesco, Meier, Reaney, Small, Unruh, Wright
Professors Emeriti: Davis, Findlay, Kuhlke, Linton, Willis
Associate Professors: Ajayi-Soyinka, Basket, Christilles, Falicov, Jacobson, Klein, Lacy, Preston, Ringer, Staniunas, Tibbetts, Willmott
Assistant Professors: Bennett, Bial, Hurst, Leon
Affiliated Lecturer: Ukpodoku

Admission
Submit your application online at www.kansas.edu/GAPC.

Send transcripts of all completed college and university coursework to
The University of Kansas
Graduate Application Processing Center
Strong Hall, 1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

Send all other requested application materials to
The University of Kansas
Department of Theatre and Film
Murphy Hall, 1530 Naismith Drive, Room 356
Lawrence, KS 66045-3102

The KU academic year in Costa Rica is the oldest continually operated university exchange program between a U.S. and a Latin American university.

KU’s graduate program in theatre is tied for 23rd in the nation, according to U.S. News & World Report’s “America’s Best Graduate Schools” rankings for 2007.
M.A. Degree Requirements

Candidates for the master’s degree in theatre and film elect an emphasis in theatre studies or film/media. The candidate’s program begins with the core requirements listed below and culminates in a thesis. To be admitted, a student ordinarily is expected to have a Graduate Record Examination score of at least 600 (verbal), 500 (quantitative), and 4.5 (analytical writing). Students who took the GRE before the implementation of the analytical writing section (before October 2002) are expected to have an analytical score of 600 or above. To complete the M.A., the student must sustain a grade-point average of 3.0 or higher through 33 graduate credit hours.

M.A. in Theatre Studies (33 hours)

Department Core. To be taken in the first semester in residence:
TH&F 800 Introduction to Graduate Study in Theatre and Film 3

Theatre Studies Core. Methodology.
TH&F 702 Graduate Seminar in: Theatre Historiography 3
TH&F 702 Graduate Seminar in: Theory and Criticism 3

Production. Choose two courses in either directing or scenography:
A. Directing
TH&F 609 Play Directing 3
TH&F 715 Problems and Techniques of Direction 3
TH&F 815 Advanced Play Production 3 (6)
B. Scenography
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 618 Scenography III 3
TH&F 619 Scenography IV 3

General Theatre Studies Concentration. Fifteen hours of courses from graduate offerings in theatre history, dramatic literature, history and criticism: 15

Of these 15 hours, up to 6 may be graduate courses from other areas such as film studies, child psychology, American studies, African and African-American studies, women’s studies, developmental psychology, English, and pertinent offerings from language and culture programs.

Completion of the Degree. An oral examination structured around a thesis based on scholarly and/or creative research:
TH&F 899 Master’s Thesis 3

All courses should be selected in consultation with the adviser.

M.A. in Film/Media (33 hours)

Department Core. To be taken in the first semester in residence:
TH&F 800 Introduction to Graduate Study in Theatre and Film 3

Film and Media Core. Studies.
TH&F 864 Classical Film and Media Theory 3
TH&F 865 Contemporary Film and Media Theory 3

Production. Choose two courses from the following list: 6
TH&F 773 Problems in Basic Screenwriting
TH&F 775 Problems in Basic Video Production
TH&F 776 Problems in Basic Film Production

Areas of Concentration. Choose 12 hours of courses from one of the following four categories: 12
A. History and Theory
TH&F 862 Survey of Film and Media History 3
TH&F 863 Survey of Documentary and Experimental Film and Media 3
TH&F 885 Latin American Film 3
TH&F 886 Asian Film 3

An appropriate TH&F 902 Film Seminar in: 3
One elective in film history or theory 3

B. International Film and Media
TH&F 862 Survey of Film and Media History 3
TH&F 885 Latin American Film 3
TH&F 886 Asian 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 902 sequence in American Popular Culture 3

One elective from the following list: 3
TH&F 862 Survey of Film and Media History 3
TH&F 863 Survey of Documentary and Experimental Film and Media 3
TH&F 885 Latin American Film 3
TH&F 886 Asian Film 3

An appropriate TH&F 902 Film Seminar in: 3

D. Theory and Practice of Production
Two electives from the following list: 6
TH&F 576 Animation
TH&F 775 Problems in Basic Video Production
TH&F 776 Problems in Basic Film Production

TH&F 873 Problems in Intermediate Screenwriting
Two electives from the following list: 6
TH&F 862 Survey of Film and Media History
TH&F 863 Survey of Documentary and Experimental Film and Media
TH&F 885 Latin American Film
TH&F 886 Asian Film

Master’s Thesis.
TH&F 899 Master’s Thesis 6

All courses should be selected in consultation with the adviser.

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 on a 4.0 scale and submit a design portfolio with work record and three letters of recommendation. To complete the M.F.A., the student must sustain a grade-point average of 3.0 or higher through 60 graduate credit hours. The following guidelines govern the distribution of hours:

Core Requirement
ADS 740 Directed Reading in Design 3

Concentration Requirements
TH&F 898 Investigation and Conference in Script Analysis 3
TH&F 818 Scenography I 3
TH&F 919 Scenography II 3
TH&F 818 Scenography III 3
TH&F 819 Advanced M.F.A. Production Seminar 6
TH&F 818 Scenography V 3
TH&F 898 Investigation and Conference 3
TH&F 899 Master’s Thesis 6

Electives: no limit, but a minimum of 15 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 ordinarily is expected to have a Graduate Record Examination score of at least 600 (verbal), 500 (quantitative), and 4.5 (analytical writing). Students who took the GRE before the implementation of the analytical writing section (before October 2002) are expected to have an analytical score of 600 or above. The applicant also must have a grade-point average of at least 3.2 for undergraduates 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.

Ph.D. in Theatre (60 hours not including language proficiency). Applicants must hold the M.A. in theatre studies or a related field acceptable to the department. Depending on background, students may have to make up some work from the M.A. including courses in the methodology sequence below. Normally, such make-up work does not count toward the Ph.D.

Core Requirements (12 hours). In consultation with an adviser, students choose from among departmental courses in theatre history, dramatic literature, theory, and criticism.

Elective Requirements (9 hours). Elective courses focus on the academic study of theatre/performance history, theory, and related methodologies. Courses are selected with a graduate adviser to reflect the student’s special interest. They may be taken outside the theatre area.

Secondary Field Requirements (9 hours). Students choose 9 hours at the graduate level from outside the department to assist them in writing the dissertation. Courses are related to the student’s proposed specialization. Examples include English, history, women’s studies, American studies, education, social welfare, etc.

Production Courses (6 hours). To prepare graduates who are artists as well as research scholars, students choose a sequence of graduate courses in either scenography or directing.

Foreign Language or Other Research Skills Requirement. The student must demonstrate proficiency in one foreign language or competence for use as research skills in two foreign languages. For one of the languages under the second option, the student
may substitute a research skill pertinent to the specialty (e.g., computer language, American Sign Language). Courses may be taken within or outside the department.

**Comprehensive Examination** (6 hours). The examination includes on-site written responses to questions in history, theory, production, literature/criticism, and the student's specialization, followed by an oral examination. While preparing for the examination, students enroll twice in TH&F 998 Investigation and Conference (for Doctoral Students).

**Dissertation** (18 hours). The finished dissertation must constitute a palpable contribution to knowledge in the candidate’s chosen field. Following its completion, an oral defense must be held no less than four weeks before the deadline for graduation. The committee consists of one chair, three departmental members, and an outside member.

**Ph.D. Degree in Film/Media** (60 hours not including language proficiency). Please meet with your adviser or graduate director each semester to assess your progress.

**Core Requirements** (24 hours). Doctoral students must take a core of courses aimed at strengthening methodological, historical, and theoretical grounding. One course must be taken in non-Western/indigenous film; two graduate-level production courses are required, and two courses in TH&F 902 Film Seminar are mandatory.

**Elective Requirements** (9 hours). Elective courses focus on the academic study of history, international cinema, popular culture, and film criticism. Courses are selected with a graduate adviser to reflect the student’s special interest. The adviser may increase the number of hours depending on the student’s academic needs.

**Production Requirements** (6 hours). Production courses give students an understanding of the production process in making film, video, or animation pieces. Upon graduation, doctoral students will be able to perform as competent artisans as well as research scholars. Production courses are selected with a graduate adviser to reflect the student’s specific interest. The adviser may increase the number of hours depending on the student’s academic needs.

**Secondary Field Requirements** (9 hours). Students choose 9 hours at the graduate level from outside the department to assist them in writing the dissertation. Courses are related to the student’s proposed specialization. Examples include English, history, women’s studies, American studies, education, social welfare, etc.

**Foreign Language or Other Research Skills Requirement.** The student must demonstrate proficiency in one foreign language or competence for use as research skills in two foreign languages. For one of the languages selected, the student may substitute a research skill pertinent to the specialty (e.g., computer language, research methods, American Sign Language). Courses may be taken within or outside the department.

**Comprehensive Examination.** Two publishable papers are due at the time of the examination. The examination includes on-site written responses to questions in history, theory, production, literature/criticism, and the student’s specialization, followed by an oral examination.

**Dissertation** (18 hours). The finished dissertation must constitute a palpable contribution to knowledge in the candidate’s chosen field. Following its completion, an oral defense must be held no less than four weeks before the deadline for graduation. The committee consists of one chair, three departmental members, and an outside member.

**Production** (6 hours) ................................................................. 6
TH&F 576 Animation (3)
TH&F 702 Graduate Seminar in: Production (3)
TH&F 773 Problems in Basic Screenwriting (3)
TH&F 775 Problems in Basic Video Production (3)
TH&F 777 Problems in Basic Film Production (3)
TH&F 873 Problems in Intermediate Screenwriting (3)
TH&F 875 Problems in Intermediate Video Production (3)
TH&F 876 Problems in Intermediate Film Production (3)
TH&F 895 Intensive Film Project Seminar (3)
TH&F 897 Practicum in Film (3)

### Theatre and Film Courses

TH&F 501 Colloquium on American Theatre/Film (1).
TH&F 506 Psychology and the Actor (3).
TH&F 508 Fundamentals of Directing (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).

Crafton-Preyer Theatre provides a venue for plays, operas, musical theatre shows, and concerts. It is a fully equipped, 1,188-seat proscenium stage facility. Its computer-controlled lighting system has been described as “the absolute state-of-the-art in theatre lighting.”

The M.F.A. in scenography is a comprehensive program encompassing scene, lighting, and costume design.
TH&F 527 Asian Theatre and Film (3).
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).
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 586 Asian 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 topics in: (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. 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 704 Study Abroad Topics in: (1-6). This course is designed for the study of special topics in Theatre and Film. Credit for coursework must be arranged through the Office of KU Study Abroad. May be repeated for credit if content varies. 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, stage management, technical theatre, promotion management. No more than six hours may be applied to a M.A. degree. Course will be graded satisfactory/unsatisfactory. Prerequisite: Consent of instructor. FLD
TH&F 708 Dramatic Script Writing (3). Study and practice in the fundamental techniques of dramatic writing and the application of such techniques 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 711 Styles of Acting: Shakespearean (3). An approach to acting styles of the period, based on a study of the art, customs, and the theatre of the times applied to scene studies taken from the works of Shakespeare. Prerequisite: TH&F 106 and TH&F 206 or consent of instructor. LEC
TH&F 713 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, 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 106 and TH&F 206 or consent of instructor. 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.F.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 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 1898 to the present. Lectures and readings in English. (Same as SLAV 562.) LEC
TH&F 773 Problems in Basic Screenwriting (3). The principles of screenwriting are developed through scene writing and analysis culminating in the writing and structuring of a full-length, three-act screenplay. In addition to the class sessions taught with TH&F 373 Basic Screenwriting, separate consultations and specific research assignments for graduate students in TH&F 773 are also required. LEC
TH&F 775 Problems in Basic Video Production (3). Theory and practice of single-camera video production with emphasis on preproduction planning, set construction, lighting, camera operation and audio. In addition to the class sessions taught with TH&F 575 Basic Video Production, separate consultations and specific research assignments for graduate students in TH&F 775 are also required. Lecture-laboratory. LEC
TH&F 776 Problems in Basic Film Production (3). An introduction to 16mm film techniques and structures, requiring construction of brief, individually produced factive-erative films employing classical continuity. In addition to the class sessions taught with TH&F 576 Basic Film Production, separate consultations and specific research assignments for graduate students in TH&F 776 are also required. Lecture-laboratory. LEC
TH&F 785 Contemporary Japanese Film (3). Seminar on the major developments in the contemporary (1980-present) Japanese film industry examining how filmmaking practices and film criticism have been influenced by such issues as transnationalism, postcolonialism, critical race theory, postmodernism, and new media. We will survey recent industrial and stylistic trends as well as key critical debates. Class discussion, reports, and individual research papers. LEC
TH&F 800 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 801 Professional Development Seminar (1). A series of weekly lecture/discussions led by invited guests both from the university and outside on various topics central to the graduate study of theatre but also to film, television, and radio. Open upon consent of instructor. LEC
TH&F 802 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 activities related to theatre production, administration 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 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. FLD
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 presentational and representational acting methods and the emergence of direct- ing art. Prerequisite: TH&F 609 or TH&F 815. 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 use 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 828 Seminar in American Theatre and Drama to 1895 (3). Intensive inves- tigation of selected topics. Individual study emphasized. LEC
TH&F 829 Seminar in American Theatre and Drama from 1895 (3). Intensive inves- tigation of selected topics. Individual study emphasized. LEC
TH&F 862 Survey of Film and Media History (3). This seminar will be primarily international in scope and will concentrate on the following: technological and production issues relating to the transition in 1927-1931 of silent to sound film; the constructions of national identity, including those of recently emerging cultures; a comparison and contrast of the censorial agencies in America and abroad; and current revisionist perspectives on received film and media history. LEC
TH&F 863 Survey of Documentary and Experimental Film and Media (3) Surveys the important historical and theoretical issues pertinent to both the documentary and experimental approaches as expressed in film, video and new technologies. Includes major documentary and experimental genres, directors, national schools, artistic movements, and landmarks works. Screenings reflect a chronology from origins to present-day. LEC

William Inge Memorial Theatre is an intimate black-box facility with seating for up to 125, suitable for plays and small opera productions.

The Baustian Theatre, a black-box facility for opera and musical theatre productions, seats 125. KU’s University Theatre stages a dozen works annually.
specific research assignments for graduate students in TH&F 873 are also required. LEC

TH&F 865 Contemporary Film and Media Theory (3). This seminar is a study of the theories applied to the study of film and media since the 1970s moving through structuralism, and into the post-structuralism, -modernism and -postmodernism. LEC

TH&F 866 Problems in Intermediate Screenwriting (3). The principles of screenwriting are developed through scene writing and story developing in the writing and structure of a full-length, three act screenplay. In addition to the class sessions taught with TH&F 473 Intermediate Screenwriting, separate consultations and specific research assignments for graduate students in TH&F 876 are also required. Lecture-laboratory. LEC

TH&F 875 Problems in Intermediate Video Production (3). Theory and practice of multiple-camera video production with emphasis on preproduction planning, scripting, directing, lighting, camera operation, and audio. In addition to the class sessions taught with TH&F 475 Intermediate Video Production, separate consultations and specific research assignments for graduate students in TH&F 876 are also required. Lecture-laboratory. LEC

TH&F 876 Problems in Intermediate Film Production (3). Further explorations of 16mm film techniques and structures, requiring construction of fictive-narrative films while working in groups. In addition to the class sessions taught with TH&F 476 Intermediate Film Production, separate consultations and specific research assignments for graduate students in TH&F 876 are also required. Lecture-laboratory. LEC

TH&F 880 Development of American Popular Culture of the (1-8). Lectures, conferences, and seminars explore the social, political, and economic development in America in the last three decades, with emphasis on television, broadcast media, mass culture, film, and popular music. Prerequisite: Consent of instructor. 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 on 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 384, 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). This course explores the national cinemas and film industries of various nations in Latin America, as well as films made by independent filmmakers. Films are analyzed both as artistic works (formal qualities, cinematic styles, and influences) and as documents that provide windows into the socio-historical context of the nation. The course focuses on the political-economic factors surrounding the production of Latin American national cinema (fiscal, cultural, economic, and sociological development). LEC

TH&F 886 Asian Film (3). Seminar on various national film cultures of East and Southeast Asia. Representational films are studied from formal, stylistic, and socio-historical perspectives. Addresses the impact of key cultural, economic and political issues on each film industry. Class discussion, reports, and individual research papers. LEC

TH&F 887 Film and the Public (3). A study of the actual and implied responsibilities of film and video to the public, as seen in regulations, self-regulatory codes, and the critical literature of the field. Prerequisite: Consent of instructor. LEC

TH&F 888 Special Problems in Film History and Criticism (1-4). RSH

TH&F 890 Seminar for Interdisciplinary Studies (1-3). To be taken in conjunction 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 completion of a film or video project. LEC

TH&F 897 Practicum in Film (1-3). Various approaches to the practice of production in film and/or video through the supervision of laboratory exercise and subsequent evaluation by the Theatre and Film graduate faculty. LEC

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 (1-6). THE

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 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. LEC

TH&F 922 Theatre Historiography (3). This course focuses on the advanced study of research methods, subjects, interpretative paradigms, theoretical frameworks, and philosophies of history employed in contemporary approaches to writing and theatre history. Prerequisite: TH&F 525 and TH&F 526 or equivalent. LEC

TH&F 928 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). THE

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, www.womensstudies.ku.edu, (785) 844-2311

Professors: Cudd, Muehlenhard, Schofield

Associate Professor: Ajayi-Soyinka

Assistant Professor: Britton, Hart, Takeyama, 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 Graduate Studies. Submit your application at www.graduate.ku.edu/GAPC. Send the application (paper or online), application fee, GRE scores and official transcripts to...

The University of Kansas
Graduate Application Processing Center
Strong Hall, 1450 Jayhawk Blvd., Room 313

Lawrence, KS 66045-7535

Send all other requested application materials to The University of Kansas
Women’s Studies Program
Bailey Hall, 1440 Jayhawk Blvd., Room 213

Lawrence, KS 66045-7574
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 ......................................................................................... 3

Recommended Graduate Electives (6 credit hours).
WS 510/AMS 510/HIST 530 History of American Women: Colonial Times to 1870
WS 511/AMS 511/HIST 531 History of American Women: 1870 to Present
WS 512/AMS 512/HIST 532 History of Women and Work in Comparative Perspective
WS 520 Women and Violence
WS 549/HIST 649 History of Feminist Theory
WS 560/AAAS 560 Race, Gender and Post-colonial Discourses
WS 562/POLS 562 Women and Politics
WS 560 Feminism and Anthropology
WS 600/POLS 600 Contemporary Feminist Political Theory
WS 601 Seminar in Women’s Studies
WS 646/HIST 646 Witches in European History and Historiography
WS 651/POLS 651 Women and Politics in Latin American
WS 660 Human Reproduction: Culture, Power, and Politics
WS 665 Women, Health, and Healing in Latin America
WS 696 Studies in: .................................................. 3
WS 701 Seminar in: .................................................. 3
WS 789/ANTH 789 Anthropology of Gender: Advanced Seminar in the Four Fields
WS 797 Directed Readings .................................................. (1-3)
WS 835 Colloquium in the History of Gender .................................................. (3). This course will cover theoretical and topical readings on the history of 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 837 Comparative Colloquium in Women’s History .................................................. (3). This colloquium will cover the history of women from a comparative perspective through theoretical and topical readings on women in at least two different cultures. (Same as AMS 837 and HIST 897.) LEC
WS 873 Seminar in United States Women’s History .................................................. (3). The seminar will familiarize students with the most important and current historiography in the field. (Same as AMS 836 and HIST 896.) 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 students will present their research and at the end of the term students will present those papers to the seminar for evaluation. (Same as HIST 973 and AMS 973.) LEC

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 653 Gender, War, and Peace .................................................. (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 797 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 ANTH 789.) Prerequisite: Permission of instructor. LEC
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 835 Colloquium in the History of Gender .................................................. (3). This colloquium will cover theoretical and topical readings on the history of manhood, womanhood, and gender systems. (Same as AMS 835 and HIST 895.) LEC
WS 836 Colloquium in United States Women’s History .................................................. (3). This colloquium will cover historical and topical readings on the history of women in the United States from the pre-contact period to the present. It is designed to familiarize students with the most important and current historiography in the field. (Same as AMS 836 and HIST 896.) LEC
WS 837 Comparative Colloquium in Women’s History .................................................. (3). This colloquium will approach the history of women from a comparative, historical and topical readings on women in at least two different cultures. (Same as AMS 837 and HIST 897.) LEC
WS 873 Seminar in United States Women’s History .................................................. (3). The seminar will focus on the history of women in the United States from the pre-contact period to the present. Students will research and write a paper using primary sources, and present those papers to the seminar for evaluation. (Same as HIST 973 and AMS 973.) LEC
WS 900 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 900.) Prerequisite: Permission of instructor. LEC
WS 901 Seminar in: .................................................. (3).

Zoology
See Biological Sciences: Ecology and Evolutionary Biology.
See pages 12-14 for admission procedures.

The University of Kansas Medical Center campus in Kansas City, Kansas, is the home of the School of Medicine.
Combined Medical & Graduate Degrees • Interdisciplinary Graduate Program in Biomedical Sciences • Anatomy & Cell Biology

Barbara Atkinson, Executive Vice Chancellor and Executive Dean
KU Medical Center, 3015A Murphy Bldg., Mail Stop 1049
3901 Rainbow Blvd., Kansas City, KS 66160
www.kumc.edu/som
Phone: (913) 588-5200, Fax: (913) 588-5259

Academic programs at the University of Kansas Medical Center are offered through the Schools of Allied Health, Medicine, and Nursing. The Office of the Dean of Graduate Studies at KUMC handles matters related to graduate programs in Allied Health, Medicine, and Nursing.

These graduate programs are available to all qualified students with appropriate baccalaureate degrees. Master’s and Ph.D. degrees also may be earned in special studies in such interdisciplinary areas as immunology, immunohematology, toxicology, medical physics, endocrinology, molecular genetics, and clinical biochemistry.

Combined Medical and Graduate Degrees

See the General Information chapter of this catalog for information about combined medical and graduate degrees.

Interdisciplinary Graduate Program in Biomedical Sciences

Director: Michael J. Werle
KU Medical Center, Mail Stop 3025
3901 Rainbow Blvd., Kansas City, KS 66160
www.kumc.edu/igpbs, (913) 588-2719, fax: (913) 588-2711

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 neuroscience; protein structure and function; pharmacology and toxicology; viral, microbial, molecular, cellular, developmental, reproductive, immunological, renal, and general physiological biology; and clinically related studies focusing on a broad range of human diseases.

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.

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 six degree-granting departments at KUMC (anatomy, biochemistry, microbiology, pathology, pharmacology and toxicology, and physiology) or the neuroscience graduate program. The KUMC graduate program is a partnership with the Stowers Institute for Medical Research, and students may conduct research at either institution.

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.

Anatomy and Cell Biology

Chair: Dale R. Abrahamson
KU Medical Center, 2008 Wahl Hall East, Mail Stop 3038
3901 Rainbow Blvd., Kansas City, KS 66160
www.kumc.edu/anatomy, (913) 588-7000
Graduate Adviser: Douglas Wright, KU Medical Center, 2087 Kansas Life Sciences Innovation Center, Mail Stop 3038, (913) 588-2713

Professors: Abrahamson, Bast, Berman, Durham, Hung, Hunt, Kinsey, Klein, Little, MacGregor, Stephens
Professors Emeriti: Chapman, Mohn, Nelson
Associate Professors: Bruses, De Lisle, Enders, Stehno-Bittel, Vanden Heuvel, Werle, Wright
Assistant Professors: Nishimune, Petroff, Rongish

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 these materials to the director of the Interdisciplinary Graduate Program in Biomedical Sciences:

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 to the department.) Medical College Admission Test scores may be considered for M.D./Ph.D. applicants and in unusual circumstances for Ph.D. applicants.
6. International applicants must submit scores on the Test of English as a Foreign Language and 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 information about the program, financial assistance, faculty research interests, and requests for application forms should be directed to the department’s graduate adviser. Further information and applications are available online at www.kumc.edu/igpibs.

M.A. Degree Requirements

A minimum of 30 credit hours is required. These hours are divided between formal course work and research/thesis. The student must satisfactorily defend the thesis in an open seminar as part of the final examination.

Ph.D. Degree Requirements

Principal courses are listed below. The majority are required as determined by the subspecialization of the student. Unspecified, but required, credits taken outside the department are selected with the counsel of the adviser, whom the student usually selects before starting the second year of study. By or at the end of the second year, the student must satisfactorily pass written and oral comprehensive examinations. The student writes and defends a grant proposal in an area of research chosen in consultation with the graduate adviser. After successful completion of the oral comprehensive examination, the student, with the advice and consent of the adviser, must name three faculty members to be recommended for the doctoral 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 student must maintain a B average overall, and the department requires a B average in all didactic courses.

Foreign Language or Research Skills. Before taking the comprehensive Ph.D. oral examination, the student must demonstrate additional expertise outside his or her immediate research area by meeting the following requirements.

1. Demonstrate proficiency in a relevant research skill that will not be used routinely as a primary skill in the student’s doctoral research, or
2. Demonstrate a reading knowledge of one foreign language. (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 segments 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 832 Electron Microscopy Techniques (3). Basic methods in preparation of tissues and cells for ultrastructural studies; use of electron microscopy in specific research problems; interpretation of biological ultrastructure; reading assignments and discussion sessions. Prerequisite: ANAT 830, or consent of course instructor. LEC

ANAT 845 Graduate Histology (2). This course will bridge student knowledge of system-based organs with cellular histology and is designed as an accelerated introduction to histological techniques, microscopy, optics, 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, PHSL 846 and NURO 846). Prerequisite: Permission of course director. LEC

ANAT 847 Developmental Neurobiology (2). Development of the nervous system from early induction to the development of learning and memory. Topics include: Induction; Cellular Differentiation; Axon Growth and Guidance; Target Selection; Central and Peripheral Nervous System; Development of Behavior. (Same as NURO 847 and PHSL 847.) Prerequisite: Advanced Neuroscience (ANAT 846, NURO 846, PHSL 846) or consent of instructor. LEC

ANAT 848 Molecular Mechanisms of Neurological Disorders (3). An in-depth coverage of pathogenic mechanisms in neurological diseases; cellular and molecular responses to brain injury and disease, neuroinflammatory diseases (e.g., multiple sclerosis), neurodegenerative diseases (e.g., Alzheimer’s, Parkinson’s, Huntington’s, amyotrophic lateral sclerosis, and prion diseases), neurogenetic diseases (e.g., spinal muscular atrophy and peroxisomal disease), and neuroimmune responses (e.g., HIV encephalitis). (Same as NURO 848, PHCL 848, and PHSL 848.) Prerequisite: Advanced Neuroscience (ANAT 846, PHCL 846 or PHSL 846) or an equivalent course and consent of instructor. LEC

ANAT 868 Advanced Developmental Biology (2). Detailed analysis of developmental mechanisms in key vertebrate systems. Fertilization, cleavage, morphogenesis and gastrulation, axis determination, and organogenesis, with special attention to the most recent advances. Prerequisite: IGPBS Module 4 or consent of instructors. LEC

ANAT 869 Grant Writing (3). All aspects of preparing grant applications are covered. This includes writing an actual grant application containing all the usual elements of grants - budgets, biosketches, resources, and scientific text. In addition, development of funding agencies, both private and government; the review process, responding to reviewers, and resubmitting grants will be covered. (Same as HP&M 878 and NRSG 889.) Prerequisite: Appropriate research methods and statistics courses in student’s current graduate program; and permission of the student, in consultation with the graduate adviser, and in partial fulfillment of the requirements for the M.A. degree. Prerequisite: Consent of adviser. RSH

ANAT 894 Module 4 of the IGPBS: Cell and Developmental Biology (5). This is module 4 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 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 PSHL 894. LEC

ANAT 895 Module 5 of the IGPBS: Molecular and Physiological Basis of Disease (5). This is module 5 of the first year curriculum 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 PHSY 895. LEC

ANAT 897 Research Rotations (1-10). Independent laboratory investigation approved by and under the supervision of the student’s adviser, and in partial fulfillment of the requirements for the M.A. degree. Prerequisite: Consent of adviser. RSH

ANAT 898 Module 6 of the IGPBS: Introduction to Faculty Research (1). The main objectives of the new IGPBS program is to: 1) give students a strong foundation in the basic principles of the basic biomedical sciences, 2) introduce students to biomedical research, and 3) provide students with sufficient introduction to the research conducted in the KUMC to allow them to select a research adviser. To facilitate points 2 and 3, the IGPBS has organized a series of research lab rotations that occur during the first year of the program. The first research rotation begins half way through the first semester and the second and third research rotation occur in the second semester. This research series introduces students to the methods of biomedical research and helps them ultimately determine which faculty member they will select as a research adviser for their doctoral research. These research rotations are organized as Pass/No credit courses. LEC

ANAT 899 Module 8 of the IGPBS: Introduction to Faculty Research (1). The main objectives of the new IGPBS program is to: 1) give students a strong foundation in the basic principles of the basic biomedical sciences, 2) introduce students to biomedical research, and 3) provide students with sufficient introduction to the research conducted in the KUMC to allow them to select a research adviser. To facilitate point 3, the IGPBS has organized a seminar series entitled “Introduction to Faculty Research.” In each session of this series, three faculty members give a brief 20-minute overview of their research program at KUMC to the IGPBS residents. This is structured as a 1 credit, Credit/No Credit course that occurs during the first semester. This research series helps the students select faculty for research lab rotations and ultimately determine which faculty member they will select as a research adviser for their doctoral research. Prerequisite: Consent of adviser. THE

ANAT 900 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 tu-
Biochemistry and Molecular Biology

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(913) 588-7005

Graduate Advisers: Glen Andrews, 2034 BRF, (913) 588-6935
Professor Emeritus: Ebner
Associate Professors: M. Fisher, Fontes
Assistant Professors: Fenton, Holyoak, Ladokhin, Swint-Kruse

Both the M.S. and the Ph.D. degrees may be earned with a major in biochemistry. The M.S. in biochemistry normally leads to positions at the advanced technical level in academic research, industry, or government. It may lead to teaching positions at the secondary or junior college level. The Ph.D. most often is followed by one or more years of postdoctoral training in a specific area of research. Ph.D. degree holders in biochemistry may find positions in industry or government and, with some postdoctoral experience, may obtain faculty positions at the college or university level. The Ph.D. is required for careers in independent research in biochemistry and molecular biology.

Applications are available online.

M.S. Degree Requirements

Prerequisites. To pursue a master’s program, the student must meet requirements for admission to graduate studies. The student also should have completed mathematics through calculus, general and analytical chemistry, and organic chemistry (8-10 credit hours, lecture and laboratory).

Requirements. The curriculum normally requires a minimum of 30 semester credit hours. Half of these hours are usually formal course work and the remainder research and thesis. Required courses are BCHM 862, BCHM 890, BCHM 891, BCHM 892, BCHM 893, BCHM 899, and ANAT 894. There is no research skills requirement or examination for the M.S. degree. The student is expected to participate in the teaching program during the second year of study. The student must maintain a B average in nonresearch and nonseminar credits as well as an overall grade-point average of B. Upon completion of research work, the student writes a thesis, presents it as a formal seminar, and defends it to a thesis committee. A final typed draft of the thesis, approved by the research adviser, is given to the thesis committee at least three weeks before the final oral defense.

Ph.D. Degree Requirements

Prerequisites. To pursue graduate study, students must meet requirements for admission to graduate studies. Students also should have completed mathematics through calculus (two semesters), general and analytical chemistry, organic chemistry (8 to 10 semester credit hours, lecture and laboratory) and two semesters of physics. Applicants should take the general aptitude and advanced sections of the Graduate Record Examination. It is possible to make up some course deficiencies in the first year of graduate study.

Course Requirements

Year Two, Fall Semester. Required:
BCHM 862 Biochemical Research-Literature Seminar ........................................... 1
BCHM 890 Master’s Research ............................................................................. 1

Required Elective (choose one):
BCHM 808 Principles of Macromolecules ................................................... 3
BCHM 922 Advanced Molecular Genetics .................................................. 3

Electives (choose one or more):
BCHM 850 Topics in Biochemistry (1) .............................................................. 1
PH 403 Stem Cell Biology (2) ........................................................................... 1
MICR 921 Advanced Microbial Molecular Genetics: Prokaryotes (3)

The student must maintain at least a B average in all nonresearch and nonseminar courses. Credit in research cannot be used to meet this grade-point average. The student completes her or his curriculum by enrolling in BCHM 990 Doctoral Research and BCHM 999 Doctoral Dissertation. All graduate students on half-time assistantships are expected to enroll in at least 6 credit hours each regular semester and 3 credit hours for the summer session.

Foreign Language or Research Skills. Before taking the comprehensive oral examination, the student must demonstrate additional expertise outside his or her primary research area by completing a course or equivalent in one of the following areas: (1) basic statistics, (2) computer programming, (3) electronics, and (4) a one-year course or its equivalent in French, German, Japanese, or Russian. If a student has had previous training in one of these areas, he or she may petition the graduate committee for credit for this requirement.

Examinations. Comprehensive written and oral examinations are administered during the second year of full-time graduate study and cover the broad aspects of biochemistry.

Dissertation. The student must complete original research, write a dissertation that is acceptable to a dissertation committee, present the results in a formal seminar, and defend the dissertation to a doctoral committee.

Teaching Experience. Graduate students may gain teaching experience as tutors in the medical biochemistry course and participants in departmental seminar programs.

M.D./Ph.D. Combined Degree Requirements

This program is open to students enrolled in the M.D. degree program. Prerequisites are the same as for the Ph.D. program. Students normally enter the M.D./Ph.D. program after completion of the basic medical science curriculum. Depending on their backgrounds in biochemistry and related sciences, students may begin early, such as the summer session before or during medical school. The course requirements are the same as for the Ph.D., except that the student’s committee may exempt him or her from BCHM 805. All other requirements for the Ph.D. program apply.

Biochemistry Courses

BCHM 801 Research In Biochemistry (1-10). LEC
BCHM 802 Biochemistry Seminar (1). Weekly meetings. LEC
BCHM 804 Medical Biochemistry II (4). Review of structure, chemistry, and metabolism of amino acids, proteins, carbohydrates, lipids and nucleic acids, as well as sections on enzyme kinetics, bioenergetics, integrated metabolism, the biochemical basis of nutrition and molecular genetics. The molecular basis of disease is emphasized throughout the course. In addition to lectures, a series of small group discussions and clinical correlations relating biochemical principles and concepts to medical problems are led by biochemistry faculty and selected clinical
first year curriculum of the Interdisciplinary Graduate Program in Biomedical Sciences (IGPBS). It will cover basic principles and advanced aspects of biochemical processes underlying cellular metabolism. LEC.

BCHM 893 Module 3 of the IGPBS: Molecular Biology (4). This is module 3 of the first year curriculum of 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, transcription and translational mechanisms, and mechanisms of gene expression. This course is co-listed as MICR 893. (Same as MICR 893.) LEC.

BCHM 899 Master's Thesis (1-15). Restricted to the writing of the master's thesis. THE.

BCHM 922 Advanced Molecular Genetics (3). An in-depth analysis of the structure and function of gene regulatory proteins and the mechanisms of gene transcription, and DNA replication and repair. Lectures and discussion of current literature. Prerequisite: BCHM 891, BCHM 892, BCHM 893, BCHM 894 or equivalent, or consent of instructor. Course will be presented in the fall semester and will include several Biochemistry Faculty leading discussions in their area of research interests. LEC.

BCHM 923 Protein Structure and Function (3). The relationship between protein structure, binding, and physiological function. Emphasis is on proteins as enzymes, structural components, and regulators. Prerequisite: BCHM 808 or consent of instructor. LEC.

BCHM 990 Doctoral Research (1-15). Research for the doctoral degree. RSH.

BCHM 999 Doctoral Dissertation (1-15). Restricted to the writing of the doctoral dissertation. THE.

Clinical Research Admission

Admission to the M.S. in clinical research degree program is competitive. Candidates should meet all general requirements for admission to graduate studies including a baccalaureate degree from a regionally accredited institution and an undergraduate grade-point average of 3.0 on a 4.0 scale. Applicants also should have passed at least one semester of college calculus.

Applicants who have not earned doctoral degrees in the United States must submit official scores on the Graduate Record Examination or other professional test scores (such as the Graduate Management Admissions Test, Medical College Admissions Test, Law School Aptitude Test) that are not more than five years old. Applicants whose native language is not English also must submit scores on the Test of English as a Foreign Language that are not more than two years old. No applicant with a score below than 230 on the computer-based TOEFL examination or 570 on the paper-based TOEFL examination will be considered.

All M.S. applications must be supported by three letters of recommendation or evaluation forms from persons qualified to assess the candidate’s aptitude for the M.S. degree program. Applicants must include a current résumé or curriculum vitae and a signed personal statement indicating their intended emphasis upon acceptance. Emphasis choices include biostatistics, epidemiology, and/or medical.

Clinical Research M.S. Degree Requirements

The 33-credit-hour M.S. degree program includes six core courses (18 hours) in epidemiology, an epidemiology laboratory, biostatistics I and II, statistical computing in research, and advanced epidemiologic methods I and II. The program also includes elective credits and a thesis. Students must complete 12 credit hours in elective courses, with 6 of those hours in the chosen emphasis. The capstone requirement, a thesis, accounts for the final 3 credit hours. Students are allowed up to seven years to complete the M.S. in clinical research degree; however, most students can complete the program in two to three years of full-time study.

Courses

See Preventive Medicine and Public Health for course offerings for the Clinical Research M.S. program.

Graduate Studies

For M.D./Ph.D. Graduate Studies courses, including courses in English as a second language, see the Graduate Studies chapter of this catalog.

KU Medical Center Graduate Studies GSMC courses, including courses in English as a second language, are listed on page 40.

The M.S. in clinical research is offered through the Departments of Preventive Medicine and Public Health.
Health Policy & Management

Health Policy and Management

Chair: Michael R. Bleich, mbleich@kumc.edu
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Graduate Advisor: Adam Keener, akeener2@kumc.edu,
5001 Student Center, (913) 588-3763
Professors: Bleich, Zimmerman
Associate Professors: Fox, Lee
Assistant Professors: Grasso, Hart

The Department of Health Policy and Management offers the Master of Health Services Administration degree. A Ph.D. degree in Health Policy and Management has been approved.

Admission

Admission is based on the applicant’s undergraduate and/or graduate record and references. Completion of a bachelor’s degree is required. Admission is competitive and limited. Each applicant must pay a processing fee of $35.

Prerequisites for admission are (1) a completed application form, (2) a brief statement of goals, (3) three letters of recommendation, (4) two copies of official transcripts, and (5) references. A personal interview is required. If travel to the area is impossible, a telephone interview may be substituted. Students begin in fall semester. Early application is encouraged. The deadline for fall admission is April 15.

M.H.S.A. Degree Requirements

All candidates must complete, at a satisfactory level, 58 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.

Ph.D. Degree

The Ph.D. in Health Policy and Management is being developed. See the department’s Web site, www.kumc.edu/hpm/phd.html, for program updates.

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/Master of Health Services Administration program combines some course work, allowing the two degrees to be completed in 68 credit hours, compared to 99 credit hours if the degrees were pursued independently. Application to both programs is required.

The Doctor of Medicine/Master of Health Services Administration joint degree program prepares students for careers as physician-executives. Total completion time for the M.D. /M.H.S.A. program is five years.

Health Policy and Management Courses

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, its distinguishing features, financing, management, ethics, and policy. 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 basic 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 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, designs, and procedures involved in conducting the major types of research found in the health services field. Students develop an informed basis for critically evaluating the methodological adequacy of research studies in the areas of descriptive and analytic epidemiology and program evaluation. 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 Applied Concepts in Health Care Financial Management (3). Strategic financial planning employing the concepts and techniques found in health services managerial accounting. These concepts include financial statement analysis, working capital management, the time value of money, capital investment analysis, capital financing, break-even analysis, operational budgeting, responsibility accounting and cost accounting. Case analysis is used to demonstrate these concepts. Prerequisite: HP&M 825. LEC.

HP&M 825 Financial Concepts in Health Services Accounting (3). The basic focus of the course is on the concepts and techniques in health services managerial accounting. These concepts include financial statement analysis, working capital management, the time value of money, capital investment analysis, capital financing, break-even analysis, operational budgeting, responsibility accounting and cost accounting. Numerous examples and exercises are used to demonstrate how these concepts apply to health care situations. Prerequisite: An undergraduate level course in accounting, finance or business management is required with the permission of the instructor. 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, systems analysis and design, 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 legal, economic, and institutional environment) are reviewed. The major focus of the course is on such concerns as 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, such as governance, medical staff organization, managing health care professionals, and maximizing effectiveness in health services organization. Prerequisite: HP&M 810. LEC.

HP&M 833 Health Law (3). Topics might include terminology; anti-trusts; licensor; 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 understanding and study in basic behavioral / managerial issues such as attitudes and values, the role of social factors in the etiology of disease, the roles of education and social organization in health behavior, the impact of organizational structure on employee and client attitudes and behavior, and the culture of professional medicine in relation to patient care. Prerequisite: HP&M 810 and HP&M 812. LEC.

HP&M 836 Topics in Health Services Administration (3). Study of selected topics in health services administration. LEC.

HP&M 837 Health Care Policy and Administration (3). A seminar designed to explore the development of public health policy in the United States. Particular atten-
Health Policy & Management • History & Philosophy of Medicine

The Department of Health Policy and Management offers the Master of Health Services Administration degree.

KU’s health services administration program is tied for 18th in the nation among public universities, according to U.S. News & World Report’s “America’s Best Graduate Schools” for 2007.

Consult the department for updates about the Ph.D. in Health Policy and Management, which is being developed.
Microbiology, Molecular Genetics, and Immunology

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Graduate Adviser: Joe Lutkenhaus, 3016 Wahl Hall West, (913) 588-7054
Professors: Lutkenhaus, Narayan, Parmely
Associate Professor: Nicot
Assistant Professors: Kim, Qiu, Vines, Yankee, Zückert
Graduate programs in microbiology and related areas are primarily for students who wish to earn the Ph.D. or combined M.D./Ph.D. degree. The M.A. degree may be granted in appropriate circumstances.

Admission

Admission is through the Interdisciplinary Program in Biomedical Sciences. In addition to general KU 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. Also required are two core courses (Immunology, MICR 808; Bacterial Genetics and Pathogenesis, MICR 820; or Virology, MICR 825) and an advanced course in the student’s subject area. 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. 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, 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 808 Immunology (3). Molecular and cellular aspects of immunity. Specific topics will include immunoglobulin and receptor structure/function, attributes of antigenicity, antigen-antibody reactions, immunocompetent cells, cellular interactions, soluble mediators of immune responses and normal and abnormal immune regulation. Prerequisite: Permission of course director. LEC

MICR 820 Bacterial Genetics and Pathogenesis (3). Genetics of bacteria with emphasis on bacterial pathogens. Topics include: gene regulation, recombination, bacteriophages, transposons, genetic exchange, plasmids, genetics of virulence, bacterial adherence and colonization, immune evasion mechanisms, bacterial toxins, vaccines and antimicrobials, re-emerging bacterial diseases. Prerequisite: Permission of instructor. LEC

MICR 825 Virology (3). Molecular biology of animal viruses. Aspects of various virus groups to be covered include structure, replication, and host cell responses. Lectures and student seminars. Prerequisite: Permission of course director. LEC

MICR 830 Seminar in Microbiology (1). Reports on research and literature. LEC

MICR 835 Research in Microbiology (2-3). This course is specifically designed to provide supervised research experience in various laboratories in the department. LEC

MICR 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 IGPBS: 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. THE

MICR 900 Advanced Microbial Physiology (3). Physiology and growth of bacterial cells. Analysis of the current literature relating to microbial physiology presented in a seminar/discussion format. Topics to be covered include transport regulation, microbial development, cellular responses to environmental stresses, DNA replication and segregation, peptidylglycan biosynthesis and cell division. Prerequisite: MICR 820 or permission of instructor. LEC

MICR 920 Advanced Microbial Molecular Genetics: Prokaryotes (3). Topics in genetic with lectures and discussions about recent advances in microbial molecular genetics. The topics include the following with emphasis on genetic aspects: Transposition and differentiation, bacterial pathogenicity, recombination, cell growth and division, DNA replication and site-specific recombination. Prerequisite: MICR 820 or permission of instructor. LEC

MICR 921 Advanced Microbial Molecular Genetics: Eukaryotes (3). Topics in genetics with lectures and discussions covering advances in molecular genetics of microbial eukaryotes. The topics include the following with emphasis on genetic aspects: Transposable elements, developmental regulation, recombination and genetic control of gene expression. Prerequisite: MICR 820 or permission of instructor. LEC

MICR 925 Advanced Virology (3). An advanced course dealing with a number of topics of special and current interest in modern virology. Lectures and/or conferences. Prerequisite: MICR 825 or permission of instructor. LEC

MICR 930 Advanced Topics in Microbiology (1-8). An advanced approach to selected topics in any of the major disciplines in microbiology: Readings and conferences, or advanced laboratory techniques. LEC

MICR 990 Research for Ph.D. in Microbiology (1-10). This course is restricted entirely to thesis research. RSH

MICR 999 Thesis for Ph.D. in Microbiology (1-10). Restricted to actual writing of dissertation. THE

Research at KU Medical Center encompasses a broad spectrum, including neuroscience; protein structure and function; pharmacology and toxicology; viral, microbial, molecular, cellular, developmental, reproductive, immunological, renal, and general physiological biology; and clinically related studies focusing on a broad range of human diseases.
Molecular and Integrative Physiology

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Graduate Adviser: Thomas Imig, timig@kumc.edu,
2077 Kansas Life Sciences Innovation Center, (913) 588-7025
Professors: Albertini, Cheney, Enna, Gonzalez, Imig, LeVine,
Nudo, Smith, Tarr, Terranova
Professors Emeriti: Sullivan, Voogt
Associate Professors: Belusov, Bilgen, Blanco, Buch, Heckert,
Tash, Wolfe, Wood
Assistant Professors: Christenson, Geiger, Kumar, Lee, Nothnick,
Stanford

Programs range from factors controlling gene expression to whole animal adaptations; the common thread is that all programs endeavor to understand biological function in health and disease. The program provides outstanding didactic instruction and laboratory experiences that enable students to become effective teachers and independent investigators. The department participates in the IGPBS at KUMC and provides research emphases in cardiovascular biology, cell and developmental biology, molecular and cellular biophysics, cellular and molecular immunology, molecular biology and genetics, neuroscience, reproductive biology, and signal transduction and cancer biology. The program is for the student pursuing the Ph.D. or M.D./Ph.D. degree. Degrees are granted to persons who fulfill all requirements.

Admission

Admission is through the Interdisciplinary Program in Biomedical Sciences. Apply online at www.kumc.edu/igpbs. The applicant must have a bachelor’s degree from an accredited college or university. Minimum course requirements are two semesters of general chemistry, two semesters of organic chemistry or one semester each of organic and biochemistry, two semesters of biological sciences, one semester of calculus, and one semester of physics. Graduate Record Examination Aptitude Test scores are required, although the results may be pending at the time of application.

M.S. Degree Requirements

Students are admitted to the M.S. program only if they have compelling reasons for pursuing advanced study, but the Ph.D. degree is not practical for them. Course requirements generally are the same as for the Ph.D., but the research component is of more limited scope.

Ph.D. Degree Requirements

Students take the core curriculum of the Interdisciplinary Graduate Program in Biomedical Sciences. This consists of nine modules:

1. Thermodynamics, protein structure, analysis of reactions, and binding kinetics
2. Cell metabolism
3. Molecular biology
4. Cell developmental biology
5. Molecular and physiological basis of disease
6. Biographics
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 required. This can be fulfilled through didactic work, mastering a laboratory technique, or activities relevant to the student’s dissertation research.

Examinations and Dissertation. Following completion of the courses, the student must successfully complete a comprehensive qualifying examination consisting of a research proposal written in the form of a National Institutes of Health grant application, which the student defends orally. The student, with the guidance of his or her dissertation adviser, conducts an original research project. The outcomes of that research are assembled as a written dissertation generally consisting of a compilation of scientific papers submitted by the student for publication. A more traditional thesis format also can be used. The student defends this research in a seminar open to all interested parties.

### 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 834 Reproductive Physiology (4). All aspects of reproductive physiology including an in-depth study of ovarian and testicular development/function, neuroendocrine regulation and related disease states, embryogenesis, pregnancy and fertility regulation are covered. Historical and current scientific literature will be used to support a graduate level text and didactic lectures. Prerequisites: a general endocrinology/physiology course or an equivalent course and consent of instructor. LEC

PHSL 838 Advanced Topics (1-3). Special studies designed and arranged on an individual basis to allow a student to pursue a particular subject through reading, special laboratory work, and conferences with a senior staff member. LEC

PHSL 844 Neurophysiology (3). Somatosensory, motor and cognitive function of the brain will be discussed using a combination of lecture and student presentation formats. Current issues and evidence underlying accepted concepts and mechanisms will be emphasized. (Same as NURO 844.) Prerequisite: PHSL 846 or another relevant course and consent of instructor. LEC

PHSL 846 Advanced Neuroscience (5). Team taught, in-depth neuroscience course focusing on normal and diseased brain function at the molecular, cellular and systems levels. Lectures and discussions will emphasize current issues in neuroscience research. (Same as ANAT 846, PHCL 846 and NURO 846.) Prerequisite: Permission of course director. LEC

PHSL 847 Developmental Neurobiology (2). Development of the nervous system from early induction to the development of learning and memory. Topics include: Induction; Cellular Differentiation; Axon Growth and Guidance; Target Selection; Cell Survival and Growth; Synapse Formation; Synapse Elimination and Development of Behavior. (Same as ANAT 847 and NURO 847.) Prerequisite: Advanced Neuroscience (ANAT 846; NURO 846; PHSL 846) or consent of instructor. LEC

PHSL 848 Molecular Mechanisms of Neurological Disorders (3). An in-depth coverage of pathogenic mechanisms in neurological diseases: cellular and molecular responses to brain injury and disease, neuroinflammatory diseases (e.g., multiple sclerosis), neurodegenerative diseases (e.g., Alzheimer’s, Parkinson’s, Huntington’s, amyotrophic lateral sclerosis, and prion diseases), neurogenetic diseases (e.g., lysosomal and peroxisomal disorders, Down’s syndrome and fragile X), trauma, stroke, and viral diseases (e.g., HIV encephalitis). (Same as ANAT 848, NURO 848, and PHCL 848.) Prerequisite: Advanced Neuroscience (ANAT 846, PHCL 846 or PHSL 846) or an equivalent course and consent of instructor. LEC

PHSL 850 Research (1-10). Original laboratory investigation conducted under the supervision of a senior staff member. RSH

PHSL 851 Seminar (1). Student participation conferences in which a sharply delineated field is examined in depth largely through critical review of current literature in the field. The subjects examined in these seminars are dictated by the interests of students and staff. 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 early morphogenetic pattern formation will also be covered. This course is co-listed as ANAT 894. 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 con-


The Mid-America Poison Control Center offers help and advice 24 hours a day through a toll-free telephone service. Call (800) 222-1222 or in Kansas City, Kansas, 588-6633, or visit www.kumed.com/poison.
Pharmacology, Toxicology, and Therapeutics

Chair: Curtis Klaassen
Graduate Adviser: Kenneth Carson
KU Medical Center, Mail Stop 1018
3901 Rainbow Blvd., Kansas City, KS 66160
www.kumc.edu/pharmacology, (913) 588-7500

Professors: Bunag, Hagenbuch, Jaeschke, Klaassen, J. Li, Pazdernik, Rozman, Wan, Weir, Zhu
Professors Emeriti: Cheng, Doull, Maguire, Poisner
Associate Professors: Levant, McCarson, Reed
Assistant Professors: Copple, Guo, Robertson, Wang, Zhong

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 nationall 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 background needed in pharmacological 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 degree is offered, the broad background required for work in pharmacology makes only the doctoral program appropriate 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 general requirements, students must meet the following departmental requirements:

Course Requirements for the Ph.D. in Pharmacology
1. Credit hours equivalent to at least three full academic years.
2. All modules 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.
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. All modules 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, PTOX 940 Techniques in Industrial Toxicology.
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, pharmacogenetics, 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 762 Pharmacology of the Autonomic Nervous System (1). General principles of the autonomic nervous system, cholinergics, muscarinic, nicotinics, neurovascular 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 anesthesia, antiparkinson agents, tranquillizers, 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, antitumor and antifungal agents, antimalarials, broad spectrum antibiotics, antiparasitic agents, and antiseptics. 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, oxotocics, adrenal steroids, antiinflammatory agents, blood drugs, antiocoagulants 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, the 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 receptors interactions. LEC

PHCL 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, PHSL 846 and NURO 846). Prerequisite: Permission of course director. LEC

PHCL 848 Molecular Mechanisms of Neurological Disorders (3). An in-depth coverage of pathogenic mechanisms in neurological diseases; cellular and molecular responses to trauma, injury, toxicology, and diseases; neurologic inflammatory disease; multiple sclerosis, neurodegenerative diseases (e.g., Alzheimer’s, Parkinson’s, Huntington’s, amytrophic lateral sclerosis, and prion diseases), genetic diseases (e.g., lysosomal and peroxisomal disorders, Down’s syndrome and fragile X).
Pharmacology, Toxicology, & Therapeutics • Preventive Medicine & Public Health

trauma, stroke, and viral diseases (e.g., HIV encephalitis). (Same as ANAT 848, NURO 848, and PHSL 848.) 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, Anti-inflammatory, Respiration, Autoimmune, Workshop: 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 885 Research in 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 toxicants. Included are molecular features of drugs and toxicants, stereoisomerism, 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. TH

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 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. TH

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

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, neuropathology, 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 basic toxicologists. Topics to be presented and discussed: cell injury, inflammation, repair and regeneration, immunopathology, neuropathology, 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. TH

PTOX 917 Disposition of Xenobiotics (4). Toxicokinetics of chemicals and drugs; discussion of the p-gp system, its influence on biologic 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 958, 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. TH

Preventive Medicine and Public Health

Kansas City: Chair: Edward Ellerbeck M.P.H. Director: Won S. Choi

KU Medical Center, 4004 Robinson Hall, Mail Stop 1008
3901 Rainbow Blvd., Kansas City, KS 66160
www.kumc.edu/premed, (913) 588-2775

Professors: Lai, Mayo, Neuberger

Professors Emeriti: Chin, Jerome

Assistant Associate Professors: Choi, Ellerbeck, Richter, Shireman

Assistant Professors: Daley, Engelman, He, James, Mahnken, Nollen

Wichita: Vice Chair: Doren D. Frederickson

M.P.H. Director: Suzanne Hawley

The University of Kansas School of Medicine–Wichita
1010 North Kansas Ave., Wichita, KS 67214-3199
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Professors: Dismuke, Fredrickson

Clinical Associate Professor: Early

Assistant Professors: Ablah, Hawley, Paschal

The Departments of Preventive Medicine and Public Health on the Kansas City and Wichita campuses offer a Master of Public Health degree. The M.P.H. program serves working health professionals who seek to enhance their ability to assess and respond to the health needs of communities and populations. The M.P.H. degree program is accredited by the Council on Education in Public Health.

Public Health Admission

Admission to the M.P.H. program is competitive. Students may apply in either Kansas City or Wichita. Admission requires a baccalaureate degree from a regionally accredited institution. An undergraduate grade-point average of 3.0 on a 4.0 scale (or its equivalent) is required for regular admission. An official copy of academic transcripts from all post-secondary institutions attended must be submitted at the time of application. Demonstration of one or more years of responsible work experience in the health field or a degree in a recognized health profession or other evidence of training or experience that indicates adequate preparation for the M.P.H. curriculum is preferred. Current enrollment in an advanced health professional degree program satisfies the experience requirements.

Applicants who have not received domestic doctoral 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 general 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. The applicant must submit a résumé or curriculum vitae and is asked to prepare a personal written statement that describes his or her career goals and motivation for seeking postgraduate training in public health.

**M.P.H. Degree Requirements**

Students must complete at least 42 graduate credit hours as prescribed by the department. Students must complete 15 hours in specified core courses in epidemiology, environmental health, public health administration, biostatistics, and the social and behavioral sciences. Students must complete 17 credit hours in elective courses approved as part of the student’s academic program. Students must complete 6 credit hours in a capstone sequence based on a 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. The two degrees may be completed in 59 credit hours instead of 79 hours. This program is designed 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.

**Ph.D./M.P.H.** The Department of Applied Behavioral Science on the Lawrence campus offers a 72-credit-hour doctoral program in behavioral science. Students learn about an array of content areas and theoretical perspectives and achieve proficiency in behavioral analysis, developmental studies, or behavioral intervention. Both the Departments of Applied Behavioral Science and of Preventive Medicine and Public Health promote community/public health and development through collaborative research, teaching, and service. The joint Ph.D./M.P.H. is ideal for students interested in prevention through community and public health. Distance-learning options are available for many M.P.H. courses. Students must apply for admission to the M.P.H. and Ph.D. programs separately. Applications are reviewed by the respective admissions committees. Students admitted to the joint program complete the 42-hour M.P.H. requirements in addition to the Ph.D.

### Preventive Medicine and Public Health Courses

**PRVM 800 Principles of Epidemiology** (3). Basic concepts of epidemiology and methods for identification of factors influencing health and disease in human populations. Considerations are centered on physical, biological, psychosocial and cultural factors in relation to infectious and non-infectious diseases; interactions between agent, host, and environmental factors as determinants of health and disease; application of the epidemiologic approach to health services; retrospective and prospective analysis of morbidity and mortality data. LEC

**PRVM 802 Principles of Epidemiology Lab** (1). This course is an additional supplement to the Principles of Epidemiology course. We will review articles and discuss the major principles of epidemiology through the use of the medical literature. This course is designed for students to obtain practical training in epidemiologic concepts and methods. Prerequisite: Concurrent enrollment in PRVM 800. LEC

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

**PRVM 804 Principles of Statistics in Public Health** (3). Introductory course concerning the concepts of statistical reasoning and the role of statistical principles as the scientific basis for public health research and practice. Prerequisite: Permission of instructor. LEC

**PRVM 805 Public Health Seminar** (1). This course will focus on public health practice. Guest lectures from the State and local public health agencies will present problems and how these problems are being addressed. Topics are expected to vary somewhat from year to year, depending on the priorities of the agencies. However, topics might include such issues as smoking prevention, automobile accidents, food-borne outbreaks, cryptosporidium outbreaks, lead poisoning in children, asthma in children, sexuality transmitted diseases diabetes, cancer control, nutrition, cardiovascular diseases, biostatistics, legal issues and administration of public health. Each topic will be covered in two separate lectures with the first week concentrating on the epidemiology of the problem and the second week concentrating on control of the problem FLD

**PRVM 806 Special Topics:** (1-4). In-depth, individualized investigation of problems in community health. Designed especially for students with limited background in community health. Prerequisite: Permission of instructor. RSH

**PRVM 807 Field Epidemiologic Investigation** (2). The student will investigate the occurrence of an infectious or chronic disease. This disease could be caused by agents in food, water, or air (etc.). The aim is to gain practical experience in epidemiologic investigation techniques which can later be presented at a seminar. Assignments will be made to state or local health departments, other governmental agencies, ongoing faculty research projects or other investigations. Prerequisite: PRVM 800. RSH

**PRVM 808 Interdisciplinary Research Seminar** (1). 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 M.P.H. 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 809 Introduction to Public Health** (3). An introduction to contemporary public health principles and practice addressing the history, philosophy, and scope of public health practice with emphasis on current organization and administration of public health programs, recent developments in medical law and regulation and the interface of public and other health related systems. Prerequisite: Permission of instructor. LEC

**PRVM 810 Clinical Trials** (3). The design, implementations, analysis, and assessment of controlled clinical trials. Basic biostatistical concepts and models will be em-

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KU’s master of public health degree program is tied for second in the nation among public universities, according to U.S. News & World Report’s “America’s Best Graduate Schools” for 2007.

**GRADUATE CATALOG**

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phrased. Issues of current concern to students will be explored. Prerequisite: PRVM 804. Principles of Statistics in Public Health or permission of instructor. LEC

PRVM 811 Introduction to Pharmacoeconomics (3). Pharmacoeconomics is the application of the principles of epidemiology to the study of medications and their effects. Failing a drug’s effects commences when a chemical entity becomes a drug candidate, intensifies through clinical trials, and continues after products reach the market. These studies are critical for supporting the proper use of medications in terms of efficacy, effectiveness, and cost-effectiveness. This course provides a broad introduction to the principles of pharmacoeconomics with a focus on applications in the medical literature. Prerequisite: Permission of instructor. LEC

PRVM 812 Public Health Biostatistical Laboratory (1). Complements Biometry 811 and Principles of Statistics in Public Health, PRVM 804. Problem-based laboratory that emphasizes the application of statistical methodology to public health practice and research. Students assess basic statistical methods 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: BMTR 811, PRVM 804 or PRVM 814. LEC

PRVM 813 Hospital Infection Control (2). This course will focus on the evaluation and prevention of hospital associated infections. Included will be methods of surveillance and reporting of infections, microbiological and environmental considerations, investigation of epidemics, institution of isolation procedures and the medical-legal aspects of the relationship between employee health and infection control. LEC

PRVM 814 Fundamentals of Biostatistics I (3). First-semester course of a two-semester introductory statistics course that provides an understanding of the proper application of statistical methods to scientific research with emphasis on the application of statistical methodology to public health practice and research. This course focuses on basic principles of statistical inference and emphasizes the use of sample methods for continuous and categorical data. This course fulfills the core biostatistics requirement. Prerequisite: Calculus or Permission of Instructor. LEC

PRVM 815 Surveillance and Control of Infectious Disease (3). This course is concerned with the public health aspects of infectious diseases of importance in the United States. Emphasis will be given to surveillance and control of reportable diseases transmitted via person to person spread, arthropod vectors, lower animals, and common sources. Special considerations are given to characteristics of the agent, host, and environment that influence transmission and selection of control strategies. Instruction is by lecture, seminars and problem-solving sessions. Prerequisite: PRVM 800 or permission of instructor. LEC

PRVM 816 International Health (2). 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 vis a vis 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). 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 and research, preventive research. Special focus will be upon the utilization of regression methodology and computer applications of such methodology. Prerequisite: PRVM 814. LEC

PRVM 818 Social and Behavioral Aspects of Public Health (3). Examination of the characteristics, beliefs and behaviors of groups and individuals concerning health issues as a basis for understanding the role of these factors in public health 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 health problems; and the effects of health on societal agreements and expectations. Prerequisite: Permission of instructor. LEC

PRVM 819 Community Health Education (3). Core concepts in community health education, combining scientific and practical knowledge which would be needed to develop successful research and implement programs. Models of analysis, management of health promotion in the workplace, health education diagnosis, planning, and evaluation. Prerequisite: Permission of instructor. LEC

PRVM 820 Community Health Promotion (2). 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). This course will focus on pertinent current occurrence for control of risk factors for chronic disease in terms of related health behaviors. 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). Internships with community agencies, community preceptors in areas of concentration. Prerequisite: Permission of instructor. FLD

PRVM 824 Health Hazard Appraisal and Risk Reduction (1-3). Study and practice in health hazard appraisal and risk reduction, including knowledge of current approaches to data gathering and analysis. Prerequisite: Permission of instructor. LEC

PRVM 825 Child and Family Health (3). Family, maternal, and child health problems will be addressed. Topics will include 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 826 Financing Health Care Services (3). This course examines the principles of financial analysis and budget management used in health care systems. It is designed as an overview course for students with minimal background in financial management theory and emphasizes practical applications in health care settings of financial organization, sources of operation revenues, budgeting and cost allocation, and financial monitoring in both the public and private sector. Prerequisite: Permission of instructor. LEC

PRVM 827 Public Health Administration (3). This course provides students with an in-depth understanding of the core functions of public health: assessment, policy development, and assurance. It uses both theoretical and practical material to develop 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 effectively, and equitably to maintain or improve the health populations. (Same as MPH 861). LEC

PRVM 828 Public Health Program Development and Management (3). Development of basic management skills as applied to the public health environment. The course will be organized into three components: 1) the public health environment of the United States; 2) the development of public health programs; and 3) public health management. Prerequisite: Permission of instructor. LEC

PRVM 829 Primary Care Research Seminar (1). The investigative research process will be reviewed using a three-part strategy. The seminar provides information about specific aspects of research design, methodology, and administration. Seminars are supplemented with small group discussions related to developing and completing a research protocol and presentations by faculty to highlight existing research studies. Students may enroll in PRVM 829 for up to 4 credit hours over successive semesters. The Seminar is designed for Primary Care and graduate students. Prerequisite: Consent of instructor. LEC

PRVM 830 Environmental Health (3). This course will identify specific health effects of environmental contaminants and discuss principles of prevention. Specific problem areas will include air and water pollution, solid waste disposal, food poisoning, radon, industrial hygiene, occupational skin and lung diseases, chemical carcinogens accidents, an agricultural health and safety. A number of guest lecturers and field trips will be utilized. LEC

PRVM 831 Research Methods in Primary Care (2). A basic introduction to primary care research with a central focus on developing a framework for planning, designing and conducting a research investigation. A written prospectus for a research project will be developed by each student. The Seminar is designed for graduate students. Prerequisite: Consent of instructor. LEC

PRVM 832 Environmental and Occupational Epidemiology (2). Epidemiological concepts applied to problems in environmental and occupational health. Theoretical issues include extrapolation from high to low doses, extrapolation from animals to man, synergism, multiple exposures, sensitive populations, and control (comparison) groups. Illnesses of concern include cancer, respiratory disease, and reproductive disease. The concept of surveillance is emphasized. Prerequisite: PRVM 800, PRVM 830, LEC

PRVM 833 Public Health Policy (3). Explore the political forces determining health policy. Critical analysis of key case studies in Public Health are used to study policy formulation, implementation through legislation and other strategies, and policy modification. Issues addressed include historical precedent, problem emergence, agenda setting, windows of opportunity, the politics of naming, funding of policies, coalition development, the role of the public service, public mobilization, and organization response. Prerequisite: Permission of instructor. LEC

The M.D./Ph.D. program at the KU School of Medicine provides an excellent background for students who want to pursue careers in academic medicine.
PRVM 834 Community Health Assessment and Development (3). Review current strategies for health assessment and planning, including methods and techniques based on needs and wants of defined populations. Students will be involved in a practical exercise emphasizing academic/community partnering, community empowerment, and accountability of both the community and professional/academic dynamism. Prerequisite: Permission of instructor. LEC

PRVM 835 Evaluation Methods in Public Health (3). Principles and procedures to evaluate health promotion and disease prevention programs. Includes data collection methods, instrument scale development, measurement, and evaluation design signs. Conducting and interpreting logistic regression of logistic data on research and writings in the area of cultural competence and community health. This course will provide a critical analysis of health behaviors, planning health promotion and disease prevention strategies, and planning for emerging health challenges. LEC

PRVM 846 Health Economics (3). This course will be designed to explore the application of economic theories, principles and concepts to the U.S. medical care system. Students will develop an understanding of the difference between health economics and medical care economics; the role of social values in economic principles and societal decision making; the determinants of supply and demand of medical care services with particular attention to the relationship between supplier and demand and need and demand; cost-containment and substitution of non-medical services; the unique nature of the medical care product; the interrelatedness of markets; the principles of and demand for health insurance and its role in the demand for medical care services; the role of government as a source of health care services. LEC

PRVM 847 Medicine in Public Health (3). Medicine in Public Health is a 3 credit hour introductory graduate level course concerning the interface between clinical medicine and public health. M.P.H. students will work with physicians-in-training to help support the health of general public health. Students will receive hands-on experience with epidemiologic studies applied to primary care settings, including population-based epidemiologic concepts and techniques of statistical analysis to the solution of epidemiologic and public health problems in children related to environmental contamination. LEC

PRVM 850 Cancer Epidemiology (3). Epidemiology of major malignant disease is discussed. Emphasis is placed on the identification of populations at risk, etiologic factors and preventable methods. Relevant information on tumor biology, immunology, and viral, chemical and physical carcinogenesis is presented. Problems unique to epidemiologic investigation of cancers are discussed. Epidemiological methodology is stressed. Prerequisite: PRVM 800. LEC

PRVM 851 Public Health Policy and Law (3). This course is designed to prepare public health leaders to live and work in a world of laws, and to play an active and effective role in policy making and analysis. Students will understand the source of national, state, and local statutes including health codes and the role of common law. Students will understand the policy process at the national, state, and local level, and develop skills analyzing legislation and influencing policy decisions. Students will understand the rule making process at the national administrative level. LEC

PRVM 852 Health Care for Special Populations (3). This course examines the characteristics and health-related needs of population groups with higher-than-average risk of disease, disability or premature death. Such groups include the frail elderly, persons with disabilities, racial and ethnic minorities, homeless people, refugees and immigrants, people with AIDS, alcohol and substance abusers, teen mothers, low-birth weight infants, victims of family or other violence, the chronically or mentally ill, and persons with mental retardation and developmental disabilities. The course uses a social epidemiology approach to explore relationships between public policy and private behavior. LEC

PRVM 853 Responsible Conduct of Research (1). The purpose of this course is to engage research trainees in reading about, considering, and discussing the responsible conduct of science. The course emphasizes current federal regulations, both those found in the Code of Federal Regulations and those in NIH guidelines. 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 education for women of all ages and backgrounds will be reviewed. Ethnicity and women's health, health policies related to women and new socioeconomic developments relevant to women's health will be reviewed in a seminar and journal-club like format featuring experts in the field. LEC

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

PRVM 858 Public Health in Film (2). The Public Health in Film course will allow students the opportunity to address multiple public health issues throughout time via educational films and public health documentaries and discussion. Specific issues will include, but will not be limited to: polio, leprosy, cholera, tuberculosis, the bubonic plague, influenza, bioterrorism and natural disasters. LEC

Graduate Catalog

Preventive Medicine & Public Health

Medical

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Focusing on mechanics, strategies to move the participant step-by-step through the pharmacology of nicotine, the mechanisms leading to tobacco addiction and biological 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 professionals. 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 862 Terrorism, Emergency Preparedness, and Response (3). Through lectures, tabletop exercises, and invited speakers, the course content will include the following topics: terminology and core competencies, public health infrastructure, collaboration and communication, roles and responsibilities, psychological effects of terrorism, agricultural and zoonotic bioterrorism, law enforcements and public health, epidemiology of BT diseases (including agent specific lectures), burn injuries, risk communication, Strategic National Stockpile (SNS), National Incident Management System (NIMS), public health law as related to bioterrorism, and public health laboratory response related to bioterrorism. LEC

PRVM 864 Global Health Communication (3). Awareness of international diseases, programs, health systems and health policies will be addressed. Concepts will include global public health issues, various approaches nations adopt to deal with them and the cultural understanding necessary to adapt health messages for the benefit of the public. Exposure to a variety of current problems faced throughout the world and discuss the three greatest challenges: reproductive health, infectious disease and nutrition. With an emphasis on the role of agencies in promoting health, the importance of health on the economic development of a nation and the reciprocal impact of the development on health status will be highlighted. 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 868 Seminar in Outcomes Management and Research (1). Political, economic, and methodologic issues that affect health care quality and outcome measurement will be discussed and analyzed in this seminar. Visiting faculty experts in outcomes management will present case studies for health care outcomes assessment and evaluation. (Same as HP&M 876 and NRSG 888.) LEC

PRVM 872 Grant Writing (3). This course combines instruction and practical exercises to move the participant step-by-step through all stages of planning programs, identifying funding sources, and writing grant proposals. Upon completion of the course, the student will have developed a quality proposal and be able to demonstrate skills in preparing grants. These will include: Development of fundable idea, Researching appropriate funding opportunities from foundations, corporations, and governmental sources; Finding potential funders on the Internet; Reviewing federal grant applications, including NIH, NSF, and HRSA applications; Development of proposal elements and crafting a quality grant application; Review of certification and assurances required on grant applications; Review of evaluation and program outcome requirements on grant applications; Working with other participants in small groups to act as internal grant reviewers, responding to reviewers, and resubmitting grants. LEC

PRVM 873 Scientific Writing (2). Includes the mechanics of how to write clearly, focusing on mechanics, structure, and style. Students will practice specific strategies for writing effectively, with in-depth attention paid to how ideas are distributed through well written sentences and paragraphs. Also includes editing and reviewing. Prerequisite: Permission of instructor. LEC

PRVM 875 Management of Public Health Data (3). A 3 credit hour graduate level course concerning basic computing skills necessary for any advanced epidemiologic or administrative quantitative methods. This course covers basics of variable and dataset creation, building, maintenance and basic descriptive (not interpretive) analysis. The course is designed to be of use to students entering a variety of research, administrative and public health settings in public health, clinical and other fields. Software covered will include SAS, SPSS, Epi Info, KPHS, Microsft, EXCEL and ACCESS. The course can stand alone, or prepare students for Biostatistics and Epidemiology courses. Public data presentations will be stressed to prepare students to communicate about data with the lay public. LEC

PRVM 877 Health Communication (3). This course is focused on community health education and promotion, especially designing and evaluating health communication programs for populations with shared risks, exposures or behaviors. Ways in which the general public receives and assigns meaning to health messages will be reviewed. The strengths and weaknesses of specific health communication initiatives will be analyzed in terms of theoretical constructs, costs and outcomes. Students apply public health principles by designing a substantive health communication piece or educational material. Prerequisite: PRVM 800; Principles of Epidemiology and PRVM 818: Social and Behavioral Aspects of Public Health. Permission of instructor may be granted in lieu of these prerequisites. LEC

PRVM 878 Cost-effectiveness and Decision Analysis (3). This course examines techniques that are used in making clinical and management decisions when outcomes are uncertain. The course begins with a review of probabilistic decision making, then explores methods of analyzing choices with uncertain outcomes. Stressing the use of decision trees and sensitivity analysis. The course examines cost minimization analysis, cost effectiveness analysis, and cost benefit analysis. (Same as HP&M 872) LEC

PRVM 879 Statistical Computing in Research (2). This course will utilize statistical packages (SAS and SPSS) for data management and analysis. Collection and management of data and the ability to conduct and describe the statistical analysis and interpret the results of the analysis will be stressed. Prerequisite: PRVM 820, PRVM 827, BMTR 811/PRVM 804, and permission of instructor. LEC

PRVM 880 The Science and Application of Community Health (2-3). Application of scientific principles in community health and epidemiology to a specific program area. This one semester course will provide in-depth coverage of a single academic specialty area. Program areas include epidemiology, health services evaluation, environmental health, and community nutrition. Prerequisite: PRVM 800, PRVM 820, PRVM 827, BMTR 811/PRVM 804, and permission of instructor. LEC

PRVM 882 Nonparametric Statistics (3). This course will study nonparametric methods in many situations as highlighted by the following topics: Students will learn how nonparametric methods provide exact p-values for tests, exact coverage probabilities for confidence intervals, exact experimentwise error rates for multiple comparison procedures, and exact coverage probabilities for confidence bands. This course will be using EXCEL and SAS to conduct various procedures. Prerequisite: PRVM 814 and PRVM 817 or consent of instructor. LEC

PRVM 884 Categorical Data and Survival Analysis (3). An intermediate level statistics course that provides an understanding of the more advanced statistical methods to scientific research with emphasis on the application of statistical methodology to clinical research, public health practice, public health research and epidemiology. Prerequisite: PRVM 814, PRVM 817 and PRVM 579. LEC

PRVM 886 Applied Linear Regression (3). Simple linear regression, multiple regression, logistic regression, nonlinear regression, neural networks, autocorrelation, interactions, and residual diagnostics. Applications of the methods will focus on health related data. Prerequisite: 1) Fundamentals of Biostatistics I (PRVM 814) or the equivalent and 2) Fundamentals of Biostatistics II (PRVM 817) or Analysis of Variance (BMTR 801) or Permission of the Instructor. LEC

PRVM 890 Research in Community Health (3). Research in community health, local health planning, and master of public health program area. Prerequisite: PRVM 800, PRVM 818, BMTR 811/PRVM 804, and departmental approval. LEC

PRVM 891 Community Health Practicum (3). Students will complete a practicum of at least 8 hours per week in a community health setting. (Same as NSRG 825.) Prerequisite: PRVM 800, PRVM 818, BMTR 811/PRVM 804, and permission of instructor. LEC

PRVM 893 Community Health Project (1-3). Completion of a written project based on the community health practicum. The student will be examined orally on the methodology and content of the project. (This course may be repeated for a maximum of six credit hours.) Prerequisite: PRVM 891 and permission of instructor. LEC

PRVM 899 Thesis (1-3). Preparation of a formal thesis based on the research conducted on a community health problem. After the thesis has been completed, the student presents the final version of the thesis to the research methods and content. Prerequisite: PRVM 890 and departmental approval. (This course may be repeated for a maximum of 6 credit hours.) THE

All full- and part-time students at KU Medical Center must have proof of health insurance coverage at all times. There is a clinical campus of the KU School of Medicine in Wichita.
KU's School of Nursing ranks in the top 10 schools of nursing in research funding from the NIH's National Institute for Nursing Research.

The KU School of Nursing's baccalaureate and master's programs are accredited by the Commission on Collegiate Nursing Education, One Dupont Circle NW, Suite 530, Washington, D.C. 20036, (202) 887-6791. They are also approved by the Kansas State Board of Nursing.
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 course in physical assessment, an undergraduate average of B or above, 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 core curriculum with a grade-point average of B or above, a written thesis or project, and a general oral examination. The program enlarges the focus of nursing, using as its foundation the basic baccalaureate nursing program. The program’s goals are directed toward educating the clinical nurse specialist, the nurse practitioner, the nurse midwife, and the nurse leader.

The advanced practice nursing major prepares the nurse for clinical nurse specialist or nurse practitioner positions. The clinical nurse specialist track includes adult/gerontological nursing. It prepares nurses to perform in the expanded role of caring for a particular kind of patient/client or to function in a particular kind of setting. The nurse practitioner track prepares nurses to provide primary health care to clients and families across the life span.

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 Family Nurse Practitioner, Health Care Informatics, Health Professions Educator, Nurse Midwifery, Organization and Leadership, Psychiatric Mental Health, Public Health Nursing, 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 (organizational leadership) with the Master of Health Services Administration or the Master of Science in nursing (public health nursing) with the Master of Public Health. By combining some course work, the two degrees may be completed in fewer hours than if they were pursued independently.

All majors present a theoretical base, part of which is held in common and included in courses completed by all master’s students. The theoretical base specific to each major is included in the major courses and accompanied by clinical or practical experience that allows the student to apply the theory in a health care setting.

The M.S. in nursing curriculum has four major components. These are the common core, advanced practice or leadership core, research, and clinical or functional specialization segments.

KU’s nurse midwifery graduate program ranks 12th in the nation, according to U.S. News & World Report's “America's Best Graduate Schools” rankings for 2007.

The leadership major in the M.S. program includes tracks in organizational leadership, public health nursing, and health care informatics.

See pages 12-14 for admission procedures.
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.

Advanced Practice Nursing Core Tracks. Courses for the clinical nurse specialist track, and nurse practitioner track can be identified by their titles.

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.

Nursing/Cognate Elective. This category offers the student the opportunity to individualize the program to meet his or her specific needs. Courses may be chosen from nursing areas in or outside the student’s major or from areas outside nursing.

Thesis/Project Option. In some majors, the student may choose to complete a thesis for 6 credit hours or to complete a project for 2 credit hours and take 4 additional credit hours of elective course work. In these majors, students who complete either the thesis or the project must complete the same total number of credit hours for graduation. Other majors assume the completion of the project instead of the thesis. The project involves applying aspects of the research process to the student’s area of nursing practice. A number of options are available for the project. Both thesis and project involve a formal paper and an oral examination covering the area of study.

Flexible Scheduling. The majority of students in the Master of Science program are part-time students. Most of these students are employed full time. Therefore, most on-campus classes are scheduled in the late afternoon and evening to accommodate these employed students. In addition, many courses are offered on the Internet or in a compressed format. 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

The doctoral program is offered in two formats: in the classroom and online. Students can choose the format that best meets their needs and learning styles.

Students can apply to the doctoral program after completing the master’s degree in nursing or after completing the baccalaureate degree with a major in nursing. The post-baccalaureate entry option is for exceptionally well-qualified B.S.N. graduates whose career goals are research oriented and who wish to progress as rapidly as possible toward the doctorate in nursing.

Admission Criteria

Post-Master’s Option

1. Completion of a master’s degree in nursing from a nationally accredited program is required. Prerequisite preparation must include the following courses:
   - Basic Statistics—3 credit hours
   - Analysis of Variance—3 credit hours
   - An option is available to replace the thesis requirement. The project involves applying aspects of the research process to the student’s area of nursing practice.
   - The student must complete a minimum of 50 credit hours.

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
   - A cumulative grade-point average of 3.5 on a 4.0 scale.
   - Required Graduate Record Examination scores are 1,000 on the verbal and quantitative sections and at least 5 on the analytical writing section (or a score of 1,500 on the three-part GRE, if taken before October 2002).

3. Potential for leadership and scholarship in nursing should be demonstrated.

4. 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: theory, empirics, and leadership. A total of 50 hours of course work is required.

Theory (6 hours)

NRSG 940 Knowledge and Theory Development in Nursing Science ........................................... 3
NRSG 942 Theory Application in Nursing Science ........................................................................... 3

Empirics (14 hours)

NRSG 944 Methods for Quantitative Research ................................................................................ 3
NRSG 944 Quantitative Research Application ............................................................................... 2
NRSG 946 Measurement Principles and Practice .................................................................................. 3
NRSG 802 Methods for Qualitative Research .................................................................................. 3
NRSG 947 Qualitative Research Application ............................................................................... 3

Leadership (13 hours)

NRSG 935 Professionalism and Scholarship Workshop ................................................................. 1
NRSG 938 Informatics and Technology Applications ......................................................................... 2
NRSG 941 Preparing for Doctoral Leadership .................................................................................. 3
NRSG 945 Synthesis Workshop I ..................................................................................................... 1
NRSG 877 Foundations in Education and Learning ........................................................................... 3
NRSG 948 Advancing Organizational and Clinical Quality .............................................................. 2
NRSG 949 Synthesis Workshop II .................................................................................................... 1

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, communication, economics, education, history, pathology, pharmacology, philosophy, physiology, political science, psychology, sociology, or any other graduate area offered by KU.

Support Courses. This area requires these courses:

Statistics (6 hours)

Regression Analysis ......................................................................................................................... 3
Multivariate Analysis ..................................................................................................................... 3

The program also requires foreign language or research skills competence, two qualifying examinations, satisfactory completion of comprehensive examination, and dissertation defense.

Post-Baccalaureate Entry Option. Students in the post-baccalaureate entry option complete a minimum of 71 credit hours, including dissertation. Students do not earn a master’s degree.
NRSG 723 Advanced Practice Geriatric Nursing of the Frail Older Adult (2-3). The knowledge and skills necessary to provide holistic care for the frail elderly client are emphasized in the interdisciplinary course. Students enrolled in this interdisci-
plinary course analyze their own and others’ writing to improve their written communications. Writing skills are practiced and developed by critiquing published articles,  
and by preparing written memorandums, letters, abstracts, and a manu-
script. Legal and ethical issues related to the publication process are explored. Pre-
requisite: Admission to the graduate program or consent of instructor. LEC

NRSG 748 Theories for Practice and Research: Individual, Family, and Community (3). Theories of health and human functioning of individuals, families, and communities are examined. Developmental, structural, functional and interac-
tional theories and methods of research are discussed. These theories from nursing and related disciplines are used to discuss health interventions. Prere-
requisite: 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 function-
ing of individuals, families and groups, and as a guide to identifying therapeutic nursing interventions. Corequisite: NRSG 750. LEC

NRSG 752 Theories for Practice II: Organizations, Community, Culture, and Society (2). Organizational, sociological, and cultural theories in relation to the internal and external environment of complex client systems are explored. Structural, functional, systemic, economic, power, and/or other macrotheories may be included. Critical components of these theories are applied to issues of health and functioning of organi-

cations, communities, and groups. Prerequisites: Admission to the graduate program or consent of instructor. LEC

NRSG 753 Theories for Practice II: Practicum (1). Selected organizational, socio-
cultural and psychological theories are applied in practice to the analysis of health and function-
ing of complex client systems. Corequisite: NRSG 752. LEC

NRSG 754 Health Care Research (3). Methods for analyzing and conducting re-
search and evaluating research in the health care field are reviewed. Research which focuses on health risks of client systems, practice guidelines, therapeutic management and on cost and outcomes will be examined. Emphasis is placed on generating research questions from theories and practice. Prerequisite: Admission to graduate program or consent of instructor. LEC

NRSG 755 Health Care Professionalism: Issues and Roles (3). Health Care Profes-
sionalism in nursing is examined from social, cultural, political and economic forces in-
teracting with complex client systems. Issues related to the changing health care environment 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. Prere-
quisite: Consent of instructor. LEC

NRSG 801 Analysis Variance (2). One-way analysis of variance (ANOVA), two-way ANOVA, repeated measures ANOVA, and analysis of covariance are emphasized. Post-
ANOVA tests, power and testing assumptions required in ANOVA are discussed and applied. Outlier detection using robust estimators also are incorporated. Boxplots, histograms and scatterplots are used to display data. Prerequisite: PRE 710/711 or equivalent. Knowledge of statisti-
cal software, basic statistical plotting methods, p-values, two-sample t-test and sim-
ple linear regression should be considered for data analysis. Prerequisite: Consent of instructor. LEC

NRSG 802 Methods for Qualitative Research (3). The naturalistic paradigm and 
various qualitative research approaches such as ethnography, phenomenology/hermeneutics, historiography, grounded theory and/or others are discussed. Emphasis is placed on the interpretation of qualitative data for de-
scription and explanation of phenomena encountered in clinical, organizational, and educational settings. Experience is provided in problem formulation and de-
velopment of qualitative research proposals. Corequisite: NRSG 754 Health Care Research, or admission to the Doctoral Program. LEC

NRSG 803 Introduction to Clinical Research (1). Course will provide a comprehen-
sive overview to clinical research. The student will gain an understanding of how to 
develop clinical research questions including protocol design and the factors that should be considered in initiating a clinical research study. This will include biosta-

tistical considerations, the recruitment of study participants, regulatory issues, and data 
management, and defining measures and instruments. Students will gain knowledge of how to define clinical research among the various institutional enti-

ties involved with clinical research at the University of Kansas Medical Center such as the Research Institute (RI), General Clinical Research Center (GCRC) and the 
Human Subjects Committee (HSC). Additionally, one component of the course will focus on the design and application of research protocols. This includes the preparation of research studies, and how to present research data. Prerequisite: 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. Spe-
cifics related to nursing interventions for assisting clients to achieve or maintain 
their best health are reviewed. Attention is given to the roles of the health care provider and care recipi-
ent in screening, communication, and counseling. The use of complementary (non-
pharmacological) therapies are discussed. Pre-
requisite: Admission to the graduate program or consent of instructor. LEC

NRSG 810 Advanced Health Assessment and Physical Diagnosis (5). Building upon 
basic health assessment, knowledge and skills for advanced clinical practice are dis-
cussed, described and demonstrated. The advanced clinical practice content is then applied in multiple clinical settings (120 hours of clinical practice is required). Content on special populations that cover the life span is presented (i.e. geriatrics, pediatrics,
women’s health) followed by directed laboratory and simulated experiences. The concept of client centered care is demonstrated through the care of individuals and families throughout the life span are discussed in this first of two sequential courses. Applications of current research and theory based interventions appropriate for protocol based management by advanced registered nurse practitioners are emphasized. Strategies to manage common health problems, in urban and rural patients, including clinical decision making 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 (3). Complex health problems seen in individuals and families throughout the life span are discussed in this second of two courses. 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 common health problems are explored. Current research outcomes and theories based on interdisciplinary models are used for management by advanced practice nurses are stressed. Collaboration and consultation (including referrals) with appropriate health providers is emphasized. Corequisite: NRSG 814. LEC

NRSG 817 Primary Care II Practicum: Management of Complex Health Problems Throughout the Life Span (2). Opportunities to develop beginning skills as advanced practice nurses in a primary care setting are provided. Emphasis is on assessment, clinical decision making, and management of clients/client systems of all ages/stages who are experiencing common health problems. Internal and external environmental factors as well as ethical, legal and economic concerns related to the presenting common health problems are explored. Current research outcomes and theories based on interdisciplinary models are used for management by advanced practice nurses are stressed. Collaboration and consultation (including referrals) with appropriate health providers is emphasized. Corequisite: NRSG 814. LEC

NRSG 818 Primary Care III: Preceptorship (2). 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 advance clinical decision making skills and research to the 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 816. LEC

NRSG 819 Advanced Pathophysiology (3). The human body is viewed as a complex system with a healthy state defined as one in which the body functions as it normally would in the absence of disease. Pathophysiology is the science which studies the impaired functions due to disease. Emphasis is placed on the physiological, psychological, sociological, and pathological aspects of disease. The course presents a review of selected body systems for the purpose of clarifying the understanding of homeostatic mechanisms in normal and pathological states. The course examines the interactions between the body systems and the detection and classification of disease. Corequisite: Permission of Instructor. LEC

NRSG 820 Advanced Concepts in Community Health Nursing: Practice Setting (3). Advanced concepts in community health nursing focusing on the evaluation, identification, and management of community health needs are emphasized. Content includes factors affecting community health, community health nursing responsibilities, and strategies for community health nursing practice. Corequisite: Permission of Instructor. LEC

NRSG 821 Early Childhood Health Promotion (3). This course introduces students to the theoretical, ethical, political, and legal foundations of community health nursing practice. Emphasis is placed on the community health role of the nurse practitioner and its relationship to the community health system. Problems in primary care are discussed as they impact on the community health nurse. Corequisite: Permission of Instructor. LEC

NRSG 822 Topics in Community Health Nursing: Health Promotion in the Community (1-5). Emphasis is on selected issues affecting health care delivery and the environment. Topics related to clinical practice are developed through the examination of community health care problems from the perspective of the client and the community. Prerequisites: Consent of instructor. NEC

NRSG 823 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, and international level. Frameworks that enable health care providers to understand, meet, and respect the multiple cultural, ethnic, and social needs of all clients are developed. Ethical and economic forces that impact health care. Together they plan and implement appropriate strategies to influence positive community outcomes. Corequisite: NRSG 880 or consent of instructor. LEC

NRSG 824 Advanced Concepts in Community Health Nursing: Practice Setting (3). Advanced concepts in community health nursing focusing on the evaluation, identification, and management of community health needs are emphasized. Content includes factors affecting community health, community health nursing responsibilities, and strategies for community health nursing practice. Corequisite: Permission of Instructor. LEC

NRSG 827 Advanced Concepts Public Health Nursing (2). This elective is addressed in the context of current research outcomes and theory based interventions appropriate for protocol based management by advanced practice nurses. Current research outcomes and theory based interventions appropriate for protocol based management by advanced practice nurses. Current research outcomes and theory based interventions appropriate for protocol based management by advanced practice nurses are emphasized. Opportunities for developing beginning skills as advanced practice nurses in a primary care setting are provided. Emphasis is on assessment, clinical decision making, and management of clients/client systems of all ages/stages who are experiencing common health problems. Internal and external environmental factors as well as ethical, legal and economic concerns related to the presenting common health problems are explored. Current research outcomes and theories based on interdisciplinary models are used for management by advanced practice nurses are stressed. Collaboration and consultation (including referrals) with appropriate health providers is emphasized. Corequisite: NRSG 814. 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 practice. Based on each student’s goals and interests, health-related needs and competencies 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. Prerequisite: NRSG 827 or permission of instructor. LEC

NRSG 830 Care of Women in the Antepartal Period (2). Care during the antepartal period in healthy pregnant women is presented and analyzed. Strategies focusing on risk reduction and early identification of deviation from normal in this clinical population are emphasized. Models for the assessment, management, and referral when medically necessary. Corequisite: NRSG 830 or consent of instructor. LEC

NRSG 831 Care of Women in The Antepartum Period Practicum (2). This clinical practicum centers on competencies for management of pregnant and family client systems in various environments. Health promotion and risk reductions in pregnant women are emphasized. Management experiences in the advanced practice role include antepartum risk-assessment, co-management, and referral when medically necessary. Corequisite: NRSG 830 LEC

NRSG 832 Nurse Midwifery in the Neonatal Period and Practicum (3). Synthesis of the nurse-midwifery philosophy for well neonates is conceptualized. Health maintenance models of care for infant client systems up to the first 28 days of life are included. Research, ethics, legal and political issues, nutrition, pharmacotherapeutics, health promotion, and selected high-risk deviation from normal are included. Clinical competencies for nurse-midwifery management of well neonates up to first 28 days are developed. Models for the assessment, management, and referral when medically necessary. Corequisite: NRSG 830 or consent of instructor. LEC

NRSG 833 Nurse Midwifery in Women’s Health Care Practicum (2). The nurse-midwifery management process is emphasized. Development of interventions for promotion clinical nurse-midwifery management of well women client systems seeking gynecologic, contraceptive, health promotion, and maintenance services are included. Nurse-midwifery students experience delivery of care in interprofessional practice environments. Competencies are assessed, consultation models are described. Corequisite: NRSG 830 or consent of instructor. LEC

NRSG 834 Nurse Midwifery in Women’s Health Care Practicum (2). The nurse-midwifery management process is emphasized. Development of interventions for promotion clinical nurse-midwifery management of well women client systems seeking gynecologic, contraceptive, health promotion, and maintenance services are included. Nurse-midwifery students experience delivery of care in interprofessional practice environments. Competencies are assessed, consultation models are described. Corequisite: NRSG 830 or consent of instructor. LEC

NRSG 835 Primary Women’s Health Care Across the Life Span (3). Psychological, sociological, and physiological issues of health and human functioning of the female client systems across the life span are explored. Theory and research based therapeutic management of acute, episodic, and chronic conditions that occur in community based women 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 sensitivity to women. Corequisite: NRSG 815, NRSG 817, NRSG 834, or consent of instructor. LEC

NRSG 836 Nurse Midwifery in the Intrapartal and Post Partum Period (3). Nurse-midwifery care of uncomplicated mother/infant client systems through the intrapartal, postpartal, and neonatal period are presented and analyzed. Intrapartal and Postpartal days of life issues and emerging issues are added. Models for the assessment, management, and referral when medically necessary. Prerequisite: NRSG 830 or consent of instructor. LEC

NRSG 837 Nurse Midwifery in the Intrapartal and Postpartum Period Practicum (3). Competencies for nurse-midwifery management according to national standards of practice for low risk healthy women during labor, birth and, postpartum are demonstrated. Competencies for management of a well woman system through the intrapartal, postpartal, and neonatal period are presented and analyzed. Competencies for management of a well woman system through the intrapartal, postpartal, and neonatal period are presented and analyzed. The nurse-midwifery management practice provides experience in the role of care provider during normal labor and delivery postpartum and in collaboration, co-management, and referral when medically necessary. Corequisite: NRSG 816 or consent of instructor. LEC

NRSG 838 Primary Care of Women Through the Life Span Practicum (1-2). This practicum centers on clinical competencies for the advanced practice nurse providing...
primary care and gynecologic management of women throughout the life span. Health promotion and disease prevention are emphasized, and evidence-based models of health care are incorporated in the care of women. Clinical management experiences in the advanced practice role include but are not limited to family planning, gynecologic health, and preventive care. Students are expected to demonstrate the concepts of preventive care, and the importance of the continuum of care for women. Client systems will include collaboration, co-management, and/or referral when medically necessary. Prerequisite/Co-requisite: NSRG 835 or consent of instructor. LEC

NRSG 840 Care of Women Integration Practicum (4). The theoretical, clinical, and role components of care as delivered by the advanced practice student are integrated. Students apply theoretical and clinical knowledge to develop advanced clinical skills and evidence-based practice in the assessment, management and care of women and newborns are applied. The client system for this experience includes well women, childbearing women and newborns, and family system with a variety of environments. Emphasis is on increased independence and decision making embracing the function and scope of advanced practice of nurse-midwifery. Prerequisite: Consent of instructor. LEC

NRSG 842 Topics In Mental Health Nursing (1-5). Investigation of special issues or problems relevant to selected client systems in mental health nursing. Prerequisite: One graduate clinical course in mental health nursing or consent of instructor. LEC

NRSG 844 Psychiatric Assessment for Advanced Nursing Practice (2). Advanced psychiatric assessment of children, adults, and the elderly will be covered including conducting caring and competent interviews in simulated situations. Assessment for psychopathology including suicide and homicide potential, substance use, mood and anxiety disturbances, psychosis, and dementia are emphasized. Prerequisite or Corequisite: NSRG 810 or consent of instructor. LEC

NRSG 845 Psychiatric Mental Health Nursing: Short-term Illness (3). Short-term mental health care (acute and brief interventions) is emphasized. Students will become familiar with assessment on a case-by-case basis for culturally diverse clients from different age groups. Theory and research based nursing interventions and standards of practice are applied in an artful manner. Corequisite: NSRG 844 Psychiatric Assessment for Advanced Nursing Practice. LEC or Consent of instructor. LEC

NRSG 847 Psychiatric Mental Health Nursing: Chronic Illness (3). 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, including psychopharmacological interventions, rehabilitation, and psychoeducation frameworks are used in examining factors that contribute to alterations in functioning in the client system's internal and external environment. Likewise, these frameworks and research outcomes related to rehabilitative goals, transition, and role transition and role performance. Prerequisite or Corequisite: NSRG 748, Theories for Practice and Research, NSRG 754, Health Care Research, NSRG 809 Health Promotion and Complementary Therapeutics; 810 Advanced Health Assessment and Physical Diagnosis, NSRG 812 Advanced Pathophysiology, 844, Psychiatric Assessment for Advanced Nursing Practice; or consent of instructor. LEC

NRSG 848 Psychiatric Mental Health Nursing: Practicum (4). Individual, family, and group client systems with chronic and complex alterations in psychological functioning are managed over time. Selected theoretical frameworks (such as biobehavioral, including psychopharmacological interventions, rehabilitation and psychoeducation) are used in examining factors in the client system's internal and external environment that contribute to alterations in psychological functioning. These frameworks and frameworks as well as research outcomes and professional standards for psychiatric mental health clinical practice are used in implementing psychophysiologic and psychoeducational interventions. Corequisites: NSRG 847, Psychiatric Mental Health Nursing: Chronic Illness, or consent of instructor. LEC

NRSG 849 Psychiatric Mental Health Nursing: Final Practicum (3-5). The integration of the psychiatric mental health advanced practice nursing role is implemented. Students have opportunities to use diagnostic reasoning, psychotherapy, psychologic interventions, interdisciplinary treatment plans, psychosocial, consultation, referral, and research findings in the management and evaluation of culturally diverse clients from different age groups. The client system for this practicum includes individual, groups, and families. Emphasis is on prevention of illness, stabi lization of client systems, and promotion of optimal mental health through interdisciplinary collaboration. Prerequisite: NSRG 845 Psychiatric Mental Health Nursing; Short-term Illness, NSRG 847 Psychiatric Mental Health Nursing: Chronic Illness, or consent of instructor. LEC

NRSG 852 Topics in Pediatric Nursing (1-5). Investigation of special issues or problems relevant to selected client system in child health care. Prerequisite: One graduate clinical course in child health care or permission of the 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 networking with other worker assistance and knowledge management theory and practice are presented in a balanced approach supporting a systematic viewpoint of the knowledge management process. Knowledge management theory and practice is enhanced with the practical application of a knowledge management system providing knowledge management tools. Prerequisites: BUS 738, NRSG 820, or consent of instructor. LEC

NRSG 855 Topics in Health Informatics (3). Investigation of current issues and trends relevant to health care informatics. Prerequisite: One graduate course in information systems or consent of instructor. LEC

NRSG 856 Health Informatics Practicum (1-3). In collaboration with health care information faculty, preceptors, students design an experience to facilitate application of theories and research related to health care informatics. Emphasis is on the application of the information system development life cycle. Students analyze the leadership and technical behaviors of various informatics roles and negotiate an informatics project to be completed within the practicum. Prerequisite: All Common Core, Leadership Core, NSRG 853, Abstraction and Modeling of Health Care Information, NSRG 855, Health Data: Theory & Practice. Prerequisite or Co-requisite: NSRG 854, Knowledge Management in Health Care, NSRG 855, Topics in Health Care Informatics, NSRG 898, Research Project in Nursing, or consent of instructor. LEC

NRSG 858 Health Data: Theory and Practice (3-4). Principles of database theory, model ing, and role hold among the adult in multiple care settings are examined as they apply to a relational database management system. Database manipulation will be explored by composing and executing query statements and critically evaluating the results. LEC

NRSG 859 Introduction to Health Informatics (2-3). This course will provide an overview of health informatics and its role in supporting the delivery of care and health care information. The course will provide the student an understanding of information needs and information systems in health care. Prerequisites: Three credits or the 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 are explored for the focus of this course. Contemporary attitudes surrounding death and dying as well as ethical, legal, cultural, social, and financial issues are examined. The needs of the dying client and families surrounding health care including pain management, psycho-spiritual care, and bereavement are discussed in relation to temporary 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 (7). Knowledge and skills necessary to provide holistic care for the culturally diverse adult across the life span are emphasized. Clinical manifestations of and patient response to selected adult health problems are emphasized. Collaborative role development with other members of the health care team concerning care of the adult is explored. Prerequisite or Corequisite: NSRG 810, Adult/Gerontological Health Care I. LEC

NRSG 863 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 multidisciplinary coordination of comprehensive managed care. Consultative, patient education, quality improvement, and project development activities will be the major focuses. Corequisite: NSRG 862 Adult/Gerontological Health Care I. LEC

NRSG 864 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 patients in adult and medical therapeutic settings are provided. Nursing therapeutics and care 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: NSRG 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 geriatric problems of cardiovascular, respiratory, renal, urinary, endocrine, reproductive, gastrointestinal, and immunological systems, infections, and oncological problems are examined. Physical and multidimensional functional assessments are emphasized as a basis for environmental and differential diagnosis and therapeutic management. Coordination of services and collaboration with an interdisciplinary team for comprehensive health care are integrated throughout the course. Prerequisite: NSRG 812, NSRG 813, or consent of instructor. Corequisites: NSRG 863 or NSRG 864. LEC

NRSG 866 Adult/Gerontological Health Care II: Practicum—CNS (4). 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 ex-
plained. Clinical practice will include independent or team coordination for com-
prehensive managed care. Consultative, patient education, quality improvement, and
project development activities will be major focuses. Corequisite: NRSG 865
Adult/Gerontological Health Care I. LEC

NRSG 866 Adult/Gerontological Health Care II: Preceptorship—CNs (3-5). The
theoretical, clinical, and research role components of care as delivered by the
adult/gerontological CNS are implemented. Opportunities are provided to utilize
diagnostic, treatment, decision making, and educational interventions. Interdis-
ciplinary treatment plans, project development, consultation, referral, 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 (3-5). The
theoretical, clinical, and research role components of care as delivered by the Adult/Geri-
atric nurse practitioner are implemented. Opportunities are provided to individualize the
theoretical, clinical, and research roles utilizing intervention plans, consultation,
referral, and research findings in the management and evaluation of culturally
diverse adult/geriatric clients with common ambulatory care problems. The client system
for this preceptorship includes adults across the life span. Emphasis is on preventing illness, promoting health and an optimal functional level. Stabilizing the ill client, and minimizing complications through an interdisciplinary approach. Prerequisite: NRSG 862 Adult/Gerontological Health Care I; and NRSG 865 Adult/Gerontological Health Care II. Prerequisite or Corequisite: NRSG 755; Health Care Professionalism: Issues and Roles, or consent of instructor. LEC

NRSG 870 Designing a Student Learning Environment (3). The roles of both the
educator and student in designing a learning environment provide the framework
for analyzing and adapting curricular philosophies, and current educational research
related to teaching strategies and education. The focus is on best practices and re-
search-based strategies to promote various learning styles and create an active learning
environment. The course increases student awareness of the diversity of multicultural student populations. Attention will be 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/models, resources for decision-making, research, and evaluation methods that create a learner centered envi-
ronment. Emphasis is on frameworks for 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, workforce development, curriculum design, program planning and evaluation 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 prob-
lems relevant to appropriate client systems (client, family, and student or health care profes-
sionals). Prerequisite: Corequisite: Consent of instructor. LEC

NRSG 873 Teaching with Technologies (3). Theories and trends that support the use
of merging and emerging 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, financial-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 ed-
cuator are implemented with a preceptor in selected educational settings. Opportu-
nities are provided to utilize teaching and learning strategies, research findings, and
evaluation modules. Prerequisite: Professional issues, educational trends, changing role of the educator, and self-assessment are incorporated in accompany-
ing 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 in promoting healthy and wellness-oriented lifestyles for
adolescent and young women is explored in relation to environmental and lifestyle
factors that result in complex health problems in the young adult female and the
childbearing family. Theoretical concepts and research are examined 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 influ-
encing health policies and paradigms are emphasized. Prerequisite or Corequisite: NRSG 752, NRSG 754, or consent of instructor. LEC

NRSG 876 Women's Health: Middle and Aging Adult (4). The role of the advanced prac-
tice nurse in the provision of health care to women and their families during the mid-
dle and aging years is implemented. The difference between the management of acute and chronic health problems are examined. Common gynecologic and obstetric health problems are compared as a basis for comparing nursing decisions. Interventions designed to main-
tain or restore system balance are implemented and evaluated in relation to research. Opportunities are provided to utilize teaching and learning strategies, research findings, and evaluation modules. Prerequisite: Consent of instructor. LEC

NRSG 877 Foundations in Education and Learning (3). Foundations and applica-
tions of education and evaluation strategies for teaching and learning in academic, clinical, and community settings. Emphasis is on applying educational theories and principles to a variety of settings including classroom, clinical, research, and evaluation settings. Importance of evidence from a variety of sources is developed to understand educational processes, products, and evaluation strategies. Students acquire knowledge to support professional development in educational environments. Prerequisite: Consent of instructor. LEC

NRSG 880 Organizational Foundations for Leading Change (3). Leadership concepts are introduced and an orientation to organizational structures and dynamics in health care organizations are introduced. Learners examine linear and non-linear mental models and analyze the social determinants that influence a service organization's capacity for change. Political, legal, and ethical influences and interventions that reverse constraints and destabilize functions, or advance and strengthen the organizational mission are explored. Prereq-
usite: NRSG 748, Theories for Practice and Research, Prerequisite or Corequisite: 755; Health Care Professionalism: Issues and Roles, or consent of instructor. LEC

NRSG 881 Applied Budgeting and Finance (3). Leaders apply basic principles associ-
ated with budgetary planning and control, and strategies in elaborating and employ-
ing budgeting and analysis techniques for academic, clinical, and community settings. Corequisites include: The financial environment of health care organizations; strategies for analyzing and evaluation processes of care delivery and their impact on systems and services. Prerequisite: consent of instructor. LEC

NRSG 882 Quality Management (3). This course integrates outcome manage-
ment 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 im-
provement programs; describe central issues in measuring functional status, qual-
ity of life, adherence to guidelines, customer satisfaction, and costs; articulate the
potential rewards and costs of quality management efforts; apply scientific evi-
dence on health care outcomes to quality management; and use techniques that are common in quality management. (Same as HP&M 863.) Prerequisite: NRSG 880 or equivalent course.

NRSG 883 Complexity Science Approaches to Improve Organizational Effectiveness (3). This course introduces complexity science principles with the aim of improving the quality and effectiveness of health care organizations. Traditional
approaches to quality improvement will be contrasted with tools and metrics that can be applied in complex organizations. Principles that relate to embeddedness, diversity, distributed control, co-existence of order and disorder, nonlinearity, in-
ability to predict, emergence, and functioning at the edge of chaos will be intro-
duced. Students use complex system evaluation and management techniques (e.g., 
Stochspac) to evaluate current and emerging health care systems with an experi-
ence to facilitate application of theories and research related to organiza-
tional leadership. Emphasis is on expanding the capacity of the emerging leader in leading change, facilitating advanced communication skills, and demonstrating one or more areas of leadership expertise. Students negotiate a leadership project to be completed within the practicum. Prerequisites: Common Core, Leadership Core, HP&M 814, Health Care Economics, NRSG 882, Quality Management: Pre-
requisite or Corequisite: NRSG 884 or equivalent course. LEC

NRSG 884 Topics in Organizational Leadership (3). Investigation of current and fu-
turistic 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 evaluating healthcare issues, their impact on health
service organizations and processes, and communities are consid-
ered. Research concepts and methods are used in a systems context. Program eval-
uation, performance improvement, and other methods of measuring outcomes are
examined for their utility within the health care setting. Linkages between pro-
gram evaluation and regulatory policy are studied. Prerequisite: NRSG 754 (or Co-requisite): NRSG 880 or consent of instructor. LEC

NRSG 886 Practicum in Organizational Leadership (1-3). The knowledge, skills,
and abilities learned throughout the course of study are integrated in a practicum ex-
periance designed to develop further specialized knowledge. The faculty and preceptor provide support and guidance to help interpret experiences, and acquire a broader world-view with a strategic leadership style. Using a variety of techniques for analyzing and evaluating processes of care delivery and their impact on systems and services, students demonstrate a capacity for leadership that is designed to facilitate application of theories and research related to organiza-
tional leadership. Emphasis is on expanding the capacity of the emerging leader in leading change, facilitating advanced communication skills, and demonstrating one or more areas of leadership expertise. Students negotiate a leadership project to be completed within the practicum. Prerequisites: Common Core, Leadership Core, HP&M 814, Health Care Economics, NRSG 882, Quality Management: Pre-
requisite or Corequisite: NRSG 884 or equivalent course. LEC

NRSG 887 Project in Nursing (5). Students apply techniques for establishing comparability, such as the adjustment and weighting of measures. 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. Stu-
dents develop research topics and design and conduct experiments that will facilitate the understanding of the relationship between nursing and outcomes. Prerequisites: Consent of instructor. LEC

NRSG 888 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 conse-
cquences of using these strategies are explored. 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. Stu-
dents develop research topics and design and conduct experiments that will facilitate the understanding of the relationship between nursing and outcomes. Prerequisites: Consent of instructor. LEC

Nursing Courses

GRADUATE CATALOG
collection instruments such as questionnaires or abstraction schedules for use with medical records. Students in this course learn how to design and implement studies and projects undertaken to describe, evaluate, and improve clinical, financial, and quality-of-life outcomes of medical health care interventions. (Same as HP&M 826.) Prerequisite: RPVM 800 or HP&M 821 or equivalent, or consent of instructor. LEC

NRSG 856 Research Methods in Nursing (3). Students conduct fieldwork to implement a qualitative research project. Emphasis is placed on advanced application of various qualitative methods. Extended experience in qualitative data collection and analysis is provided. Prerequisite: NRSG 862, NRSG 940 or consent of instructor. LEC

NRSG 940 Knowledge and Theory Development in Nursing Science (3). The philosophy and history of nursing theory and research are discussed. The historical course of nursing science are examined. Philosophical and scientific foundations of knowledge development in nursing science are explored. Conceptual and theoretical development and their application in the integration of theory, research, and practice knowledge development in nursing science is emphasized. Prerequisite: NRSG 938 or consent of instructor. LEC

NRSG 945 Synthesis Workshop I (3). Leadership development and technological applications of knowledge. (Same as PRVM 928.) Prerequisite: RPVM 946. PRE 905 or consent of instructor. LEC

NRSG 946 Measurement Principles and Practice (3). Classical measurement theory and related measurement concepts are the focus of this course. Various approaches to instrument development and evaluation are presented and students apply selected measures, with emphasis on reliability and validity. They also critically analyze published reports of instrumentation for research. Basic knowledge of concept analysis is expected prior to enrollment. Prerequisite: NRSG 940 or consent of instructor. LEC

NRSG 947 Qualitative Research Application (3). Students conduct fieldwork to implement a qualitative research project. Emphasis is placed on advanced application of various qualitative methods. Extended experience in qualitative data collection and analysis is provided. Prerequisite: NRSG 862, NRSG 940 or consent of instructor. LEC

NRSG 948 Advancing Organizational and Clinical Quality (2). The roles of nursing leaders in the design, measurement, and evaluation of the discipline within a variety of organizational settings are analyzed. The nuances of measurement and statistics are compared and related to the quality science paradigm, applying incremental measurement techniques to foster continuous improvement. Process design, standards development and adaptation, regulatory requirements, and consumer expectations for quality are integrated into a quality plan that aligns with the student’s career trajectory. Prerequisite: NRSG 944, NRSG 947 or consent of instructor. LEC

NRSG 949 Quantitative Synthesis Workshop (3). Corequisite: APPR 955. Additional emphasis is placed on advanced application of various quantitative methodologies. Students develop methods to integrate and synthesize. Strategies for using these content areas to meet program objectives and students’ professional objectives are explored. A qualifying examination of a written research proposal is required. Prerequisite: APPR 904, or consent of instructor. LEC

NRSG 950 Qualitative 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. 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 in biophysical, psychological, and cultural, economic, and political for

NRSG 959 Research Experience (3). The roles of nursing students in research are examined. Philosophical and scientific foundations of knowledge development in nursing science are explored. Conceptual and theoretical development and their application in the integration of theory, research, and practice knowledge development in nursing science is emphasized. Prerequisite: NRSG 938 or consent of instructor. LEC

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 nurs-

NRSG 965 Special Topics: (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: NRSG 950 or consent of instructor. LEC

NRSG 977 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 guidance in the course work in the program. Corequisite: APPR 979. LEC

NRSG 990 Doctoral Research (1-12). Preparation of the dissertation based upon original research and in partial fulfillment of the requirements for the Ph.D. degree. Prerequisites: NRSG 950 and consent of adviser. LEC

NRSG 995 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: Corequisite: APPR 990 and consent of adviser. THE
See pages 12-14 for admission procedures.

Application fees: Domestic students in pharmacy: paper $55, online $45.
International students in pharmacy: paper $60, online $55.

KU is a member of the American Association of Colleges of Pharmacy and is accredited by the American Council on Pharmaceutical Education.
Clinical Assistant Professors: Davidow, Emerson, Eng, Kleoppel.
Assistant Professor: Barnes
Clinical Associate Professor: Backes
Moeller, Ragan, Woods
Associate Professors: Grauer, Henry, Lacy
Clinical Professor: Generali

Send transcripts of all completed college and university course work to

The University of Kansas
Graduate Application Processing Center
Strong Hall, 1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

Send all other requested application materials to

The University of Kansas
Department of Pharmacy Practice
Malott Hall, 1251 Wescoe Hall Dr., Room 6050
Lawrence, KS 66045-7582

Hospital Pharmacy
Interim Chair and Graduate Adviser: Dennis W. Grauer
Malott Hall, 1251 Wescoe Hall Dr., Room 6050
Lawrence, KS 66045-7582 or
KU Medical Center, Mail Stop 4040
3910 Rainbow Blvd., Kansas City, KS 66160, (913) 588-3362

www.pharm.ku.edu/phprr, (785) 864-4881
Professors: Godwin, Howard
Clinical Professor: Generali
Associate Professors: Grauer, Henry, Lacy
Clinical Associate Professor: Backes
Assistant Professor: Barnes
Clinical Assistant Professors: Davidow, Emerson, Eng, Kleoppel, Moeller, Ragan, Woods

Admission
In addition to meeting the general requirements for admission to graduate studies, applicants are considered for admission if they are graduates of a school of pharmacy accredited by the American Council on Pharmaceutical Education and are eligible for licensure as registered pharmacists by the Kansas State Board of Pharmacy. A bachelor of science degree or a doctor of pharmacy (Pharm.D.) degree with a major in pharmacy is required.

Submit your application online at www.graduate.ku.edu/GAPC.

M.S. Degree Requirements
A minimum of 30 credit hours, with a majority of hours in pharmacy, is required for the degree. These courses may be selected from related fields after approval by the department. Examples are hospital pharmacy, clinical pharmacy, nuclear pharmacy, computer science, business administration, health policy and management, and related fields. An approved project, representing 6 to 9 credit hours of original research, is required. It may be in pharmaceutical sciences, clinical pharmacy, pharmacy practice, pharmacotherapy, or hospital pharmacy.

To provide practical experience, an accredited specialty residency in pharmacy practice management in an approved hospital is required of each student. Requirements for the residency program include eligibility for licensure as a pharmacist in Kansas. The student must complete the residency concurrently with the academic portion of the program. Upon satisfactory completion of the residency, the student receives a certificate of residency from the cooperating hospital. The typical length of the program is two years. For students who have previously completed 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 635 Problems in Pharmacy Practice (1-5).
- PHPR 685 Hospital Pharmacy Administration (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.
- PHPR 850 Introduction to Pharmacoepidemiology (3). Pharmacoepidemiology is the application of the principles of epidemiology to the study of medications and their effects on health. Evaluating a drug’s effects commences when a chemical entity becomes a drug candidate, intensifies through clinical trials, and continues after products reach the market. These studies are critical for supporting the proper use of medications in terms of efficacy, effectiveness, and cost-effectiveness. This course provides a broad introduction to the principles of pharmacoepidemiology with a focus on applications in the medical literature. LEC
- PHPR 855 Economic Evaluation of Health Care Programs and Services (3). The course will provide students with an overview and appraisal of the “state-of-the-art” in the evaluation of health care programs and services (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.
- 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.

KU's School of Pharmacy ranked third among the nation's elite programs in fiscal year 2006 for securing funding from the National Institutes of Health. The school received more than $14.5 million in NIH funding.

The School of Pharmacy operates one of the most extensive programs of research and graduate education in the pharmaceutical sciences in the country.
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: B. Timmermann, medchem@ku.edu
Graduate Adviser: Apurba Dutta, adutta@ku.edu
Malott Hall, 1251 Wescoe Hall Dr., Room 4070
Lawrence, KS 66045-7582, www.medchem.ku.edu, (785) 864-4495
Professors: Aldrich, Aubé, Grunewald, Hanzlik, Mitscher, Peterson, Timmermann
Professor Emeritus: Scarpaci
Assistant Professors: Blagg, Dutta, Prisinzano, Schönbrunn
Associate Professors: David, Scott

Admission
An applicant wishing to enter the graduate program must have earned a bachelor’s or master’s degree in pharmacy, medicinal chemistry, chemistry, biochemistry, or a closely related field, and must have completed one year of organic chemistry with laboratory (equivalent to CHEM 624, CHEM 625, CHEM 626, and CHEM 627). In all cases, general admission requirements must be met. Applications are evaluated by the Graduate Selection Committee. Applications must be supported by official transcripts (one copy) 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 Graduate Selection Committee and are based on grade-point averages for previous college work (particularly in the relevant science areas), letters of recommendation, previous research or employment experience relevant to the graduate training being sought, 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 online at www.graduate.ku.edu/GAPC. Send test scores and transcripts of all completed college and university course work to
The University of Kansas
Graduate Application Processing Center
Strong Hall, 1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535
Send all other requested application materials to
The University of Kansas
Department of Medicinal Chemistry
Malott Hall, 1251 Wescoe Hall Dr., Room 4070
Lawrence, KS 66045-7582

M.S. Degree Requirements
Candidates for this degree must satisfy general requirements as well as those of one of the following options:
Students who are proceeding toward the Ph.D. degree at KU receive the master’s degree after satisfactorily completing the course work requirement for the Ph.D. and passing a comprehensive oral examination.

Students who wish to earn only the M.S. degree must complete a prescribed subset of the course work requirements for the Ph.D. degree, 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 courses as early as is practical in the graduate program: one semester of physical chemistry (CHEM 640 or CHEM 646), mammalian physiology (BIOI 646), and biochemistry (MDCM 701). Satisfactory completion of qualifying examinations in organic chemistry and biochemistry also are required.

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 the 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.

General requirements, such as those related to the comprehensive oral examination, the dissertation, and the dissertation defense, are listed in the General Information chapter of this catalog.

Facilities
The department has research facilities for about 70 graduate students, postdoctoral associates, and research technicians. Malott Hall, where most of the medicinal chemistry laboratories are located, also houses the Departments of Chemistry and Pharmacology and Toxicology; Anschutz Library is adjacent to the building. 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 laboratories for biochemical services, X-ray crystallography, nuclear magnetic resonance, computational chemistry, instrument design, mass spectrometry, and tissue culture are available for use in research, 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 605 Phytomedical Agents (1)
MDCM 606 Phytomedical Agents II (1)
MDCM 625 Medicinal Chemistry I: Neuroeector Agents (3)
MDCM 626 Medicinal Chemistry II: Homeostatic Agents (3)
MDCM 627 Medicinal Chemistry III: Chemotherapeutic Agents (3)
MDCM 675 Introduction to Drug Design and Development (2-3)
MDCM 690 Undergraduate Research (1-5)
MDCM 691 Research Techniques in Medicinal Chemistry (1)
MDCM 692 Problems in Medicinal Chemistry (1-5)
MDCM 701 Biomedical Chemistry (3). A study of the principles of macromolecular structure and function, biosignaling, bioenergetics, and metabolism. In addition, the course will cover lipids, hormones, vitamins, and minerals. Prerequisite: Graduate standing or permission of instructor. LEC
MDCM 703 Advanced Biomedical Chemistry (3). A study of the principles of basic enzymology, including chemical reactions, biosynthesis, and metabolism. In addition, the course will cover lipids, hormones, vitamins, and minerals. Prerequisite: Graduate standing or permission of instructor. LEC
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. Graded on a satisfactory/unsatisfactory basis. LEC
MDCM 721 Introduction to Medicinal Chemistry (1). An overview of the field of medicinal chemistry, including discussions of research techniques and the applica-
tion of organic chemistry to medicinal chemistry problems. Prerequisite: Graduate standing or permission of instructor. LEC

MDCM 722 Principles of Organic Medicinal Chemistry (3). The discovery and properties of pharmaceutical agents, including a survey of the various drug classes important in clinical applications. The relationship between chemical structure and biological activity is emphasized. Prerequisite: Graduate standing or permission of instructor. LEC

MDCM 742 Experimental Pharmacology (4). Experimental approaches to understanding mechanism of drug action. Use of drugs as tools to understand functioning of biological systems will also be stressed. Historically important experiments will be discussed along with experiments which are currently used to define drug mechanisms. Topics will include: dose-response, drug receptors, drug metabolism, chemotherapy as well as autonomic 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 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 P&TX 775.) Prerequisite: Consent of instructor. LEC

MDCM 777 Advanced Laboratory Techniques in Medicinal Chemistry (2). A laboratory course designed to acquaint advanced undergraduate and beginning graduate students with laboratory safety, the research notebook, use of advanced instrumental techniques for structural assignment and verification, methods of separation and purification, and the use of advanced reagents and laboratory transformations relevant to research in medicinal chemistry. Prerequisite: Consent of instructor. LAB

MDCM 785 Natural Products of Medicinal Significance (2). A discussion of the principles of contemporary drug discovery with specific examples from the original literature. Produrgs, biocatalysts, and intermediates in drug development are covered. Prerequisite: Consent of instructor. LEC

MDCM 790 Principles of Drug Design (3). A discussion of the principles of contemporary drug design with specific examples drawn from the original literature. Prodrugs, bioscavengers, anti-oxidants, active site directed reversible and irreversible inhibitors, quantitative SAR, modulation of drug absorption, distribution, metabolism and excretion, molecular motion, rigid analogs, pharmaceutics, etc., will be treated. Prerequisite: Graduate standing or completion of MDCM 624 and MDCM 627. LEC

MDCM 791 Principles of Drug Disposition (1). An introduction to the chemical and biochemical principles which govern the interaction of drugs with cells and organisms. Topics include absorption, distribution, metabolism, excretion, and the mechanisms of toxicology in terms of pharmacokinetics (bioavailability, excretion, detoxication; and applications in drug design and improvement. Prerequisite: One year of organic chemistry and one course in biochemistry. LEC

MDCM 799 Seminar in Medicinal Chemistry (1). Reports by research students and discussions of developments in the field not covered in formal courses. LEC

MDCM 801 Issues in Scientific Integrity (1). Lectures and discussion on ethical issues in the conduct of a scientific career, with emphasis in the conduct of a scientific career, with emphasis on practical topics of special importance in molecular-level research in the chemical, biological, and pharmaceutical sciences. Topics will include the nature of ethics, the scientists in the laboratory, the scientist as author, grantee, reviewer, employer/employee, teacher, student, and citizen. Discussions will focus on case histories. Graded on a satisfactory/unsatisfactory basis. (Same as MDCM 801, NURS 801, and PHC 801.) LEC

MDCM 860 Drug Metabolism (2). An in-depth examination of the pathways, enzymes, and mechanisms of xenobiotic biotransformation in a combined lecture-readings-discussion format. Emphasis will be on recent as well as classic methods of drug metabolism; molecular dissection; rigid analogs; pharmacophores; etc., will be treated. Prerequisite: Consent of instructor. LEC

MDCM 861 Drug Metabolism Laboratory (1-3). A laboratory course exemplifying various techniques used in studying the metabolism of foreign organic compounds in mammalian systems. In addition, enzymatic reactions in other plant and microbial systems are studied. Prerequisite: Consent of instructor. LAB

MDCM 890 Research in Medicinal Chemistry (1-12). Hours and credit to be arranged. RSH

MDCM 899 Master’s Thesis (1-12). Hours and credit to be arranged. Independent investigation of a research problem of limited scope. Prerequisite: Consent of instructor. THE

MDCM 950 Advanced Topics: __________ (1-3). An in-depth discussion of topics of current interest to medicinal chemists. Prerequisite: Consent of instructor. LEC

MDCM 951 Introduction to Molecular Modeling (3). Theory and practice of contemporary molecular modeling; real-time computer graphics, model-building routines, use of structural databases, molecular mechanics and molecular dynamics calculations. The laboratory section places emphasis on drug design; work on own projects is welcome. (Same as MDCM 691 and CHEM 691.) LEC

MDCM 953 Principles of Drug Design (3). A discussion of the principles of contemporary drug design with specific examples drawn from the original literature. Prodrugs, biocatalysts, and intermediates in drug development are covered. Prerequisite: Consent of instructor. LEC

MDCM 980 Original Research Proposal (1). Preparation of an original research proposal concerning contemporary problems in medicinal chemistry. Prerequisite: Consent of instructor. LAB

MDCM 990 Postdoctoral Research in Medicinal Chemistry (1-12). Advanced level research in collaboration with a faculty member, which may involve projects in one or more of the following areas: organic synthesis, isolation and structure elucidation, metabolism, biochemical mechanisms of drug action. Prerequisite: Doctoral degree or equivalent in an appropriate related area, and consent of instructor. RSH

MDCM 991 Introduction to Molecular Modeling (3). Theory and practice of contemporary molecular modeling; real-time computer graphics, model-building routines, use of structural databases, molecular mechanics and molecular dynamics calculations. The laboratory section places emphasis on drug design; work on own projects is welcome. (Same as MDCM 691 and CHEM 691.) LEC

Medicinal Chemistry • Neurosciences

Neurosciences
Co-director: Elias K. Michaelis, emichaelis@ku.edu
Malott Hall, 1251 Wescoe Hall Dr., Room 304B
Lawrence, KS 66045-7582, (785) 864-4001 or (785) 864-7339
Co-director: Paul D. Cheney, pcheney@ku.edu
KU Medical Center, 3011 Wahl Hall East (A), Mail Stop 3043
3901 Rainbow Blvd., Kansas City, KS 66160, (913) 588-7400
Participating Faculty Members: Aldrich (Medicinal Chemistry), P. Atchley (Psychology), R. Atchley (Psychology), Audus (Pharmaceutical Chemistry), Auer (Speech-Language-Hearing: Sciences and Disorders), Barohn (Speech-Language-Hearing: Sciences and Disorders), Belousov (Molecular and Integrative Physiology), Berman (Anatomy and Cell Biology), Bilgen (Molecular and Integrative Physiology), Brooks (Hoglund Brain Imaging Center), Brzeski, (Anatomy and Cell Biology) Cheney (Molecular and Integrative Physiology), Chertoff (Hearing and Speech), Choi (Hoglund Brain Imaging Center), Colombo (Psychology), Dien (Psychology), Dobrowsky (Pharmacology and Toxicology), Durham (Otolaryngology), Enna (Pharmacology, Toxicology, and Therapeutics), Festoff (Neurology and Pharmacology, Toxicology, and Therapeutics), Fiorentino (Linguistics), Floor (Molecular Biosciences), Fowler (Pharmacology and Toxicology), Gambill (Molecular Biosciences), Hardi (Psychology), Imig (Molecular and Integrative Physiology), Johnson (Chemistry), Kelly (Molecular Biosciences), Kim (Pharmacology and Toxicology), Klein (School of Medicine, Faculty Development, Anatomy and Cell Biology), Kruunlauf (Anatomy and Cell Biology, Biochemistry and Molecular Biology), Lee (Hoglund Brain Imaging Center), Levant (Pharmacology, Toxicology, and Therapeutics), LeVeine (Molecular and Integrative Physiology), Lundquist (Molecular Biosciences), Lunte (Pharmacology, Toxicology, and Therapeutics), M. Michaelis (Pharmacology and Toxicology), Nishimune (Anatomy and Cell Biology), Nudo (Molecular and Integrative Physiology), Orr (Molecular Biosciences), Radel (Occupational Therapy), Rice (Speech-Language-Hearing: Sciences and Disorders), Smith (Molecular and Integrative Physiology), Stanford (Molecular and Integrative Physiology), Steinmetz, (Psychology and Molecular Biosciences), Trainor (Anatomy and Cell Biology), Warren (Applied Behavioral Science), 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 behavioral, biological, chemical, and pharmaceutical sciences, and the Medical Center campus in Kansas City, 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 is a truly multidisciplinary research field. All students are expected to be able to understand the fundamental principles and contributions of each of the major disciplines of the neurosciences core. New students receive training in biochemistry and molecular biology, cell biology, and physiology before proceeding with more focused courses.
Admission
All application materials are reviewed by faculty committees in Lawrence and Kansas City. Students should have B.A. or B.S. degrees in anthropology, behavioral sciences, biology, chemistry, engineering, neuroscience, or pharmacological sciences. Preference is given to students who have completed courses in introductory and organic chemistry, calculus, physics, introductory biology, and at least one course in advanced biology topics such as biochemistry, physiology, microbiology, molecular biology. Students who do not have sufficient training complete appropriate courses before admission. The program requires standard Graduate Record Examination scores with all applications, three letters of recommendation, and an essay by the applicant about his or her career goals. Selection is based on grade-point average, GRE scores, letters of recommendation, and evidence of previous experience in research. The minimum standard is a grade-point average of 3.0 on a 4.0 scale.

Submit your application online at www.graduate.ku.edu/GAPC.

The University of Kansas
Graduate Application Processing Center
Strong Hall, 1450 Jayhawk Blvd., Room 313
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 in the curriculum of the first year of the Ph.D. training program.
• The course in advanced neuroscience.
• A thesis based on either original research or library research.
• The total credit hours of graduate-level courses required for the M.S. degree.

Ph.D. Degree Requirements
The neuroscience curriculum is subdivided into core courses that all students must complete and electives representing the two major specializations, Cell and Molecular Neuroscience and Cognitive and Systems Neuroscience. The core curriculum includes research rotations in two laboratories of the student’s choice during the first year. Laboratory rotations offer first-hand research experience. Students complete two rotations in faculty research laboratories in the first year. Laboratories are selected by the student and the co-directors. After the rotations, each student chooses a research adviser and begins an independent research project.

Students also receive training in the responsible conduct of research and teaching in the neurosciences. For the Ph.D., the student completes the core curriculum as well as research skills training, comprehensive oral examination, preparation of a dissertation, and final oral examination and defense of the dissertation.

Core Curriculum for the Ph.D. in Neurosciences

<table>
<thead>
<tr>
<th>KU Lawrence</th>
<th>KU Medical Center</th>
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<tbody>
<tr>
<td><strong>Year One, Fall Semester</strong></td>
<td><strong>Year One, Fall Semester</strong></td>
</tr>
<tr>
<td>BIOL 750 Advanced Biochemistry</td>
<td>IGPBS Module 1: Protein Structure, Thermodynamics, Kinetics</td>
</tr>
<tr>
<td>Cognitive and Systems Neuroscience course</td>
<td>IGPBS Module 2: Cell Metabolism</td>
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<tr>
<td>BIOL 752 Cell Biology</td>
<td>IGPBS Module 3: Molecular Biology</td>
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<tr>
<td>Lab rotations</td>
<td>Lab rotations</td>
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<tr>
<td>NURO 799 Neuroscience Seminar Series</td>
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<tr>
<td><strong>Year One, Spring Semester</strong></td>
<td><strong>Year One, Spring Semester</strong></td>
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<tr>
<td>PHSL 846 Advanced Neuroscience</td>
<td>PHSL 846 Advanced Neuroscience</td>
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<tr>
<td>BIOL 646 Mammalian Physiology</td>
<td>NURO 800 Neuroscience Teaching Principles</td>
</tr>
<tr>
<td>Lab rotations</td>
<td>Research Skill: One lecture course or One laboratory course</td>
</tr>
<tr>
<td>NURO 801 Issues in Scientific Integrity</td>
<td>NURO 799 Neuroscience Seminar Series</td>
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<tr>
<td>NURO 802 Issues in Scientific Integrity</td>
<td>Year Two, Fall Semester</td>
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<tr>
<td>NURO 803 Issues in Scientific Integrity</td>
<td>NURO 779 Neuroscience Seminar Series</td>
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<tr>
<td>NURO 804 Issues in Scientific Integrity</td>
<td>Year Two, Spring Semester</td>
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<tr>
<td>NURO 805 Issues in Scientific Integrity</td>
<td>Completion of written and oral comprehensive examination</td>
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<tr>
<td>NURO 806 Issues in Scientific Integrity</td>
<td>Year Three, Fall/Spring</td>
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<tr>
<td>NURO 807 Issues in Scientific Integrity</td>
<td>NURO 999 Dissertation Research</td>
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<tr>
<td>NURO 808 Issues in Scientific Integrity</td>
<td>Year Four, Fall/Spring</td>
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<tr>
<td>NURO 809 Issues in Scientific Integrity</td>
<td>NURO 999 Dissertation Research</td>
</tr>
<tr>
<td>NURO 810 Issues in Scientific Integrity</td>
<td>Students must complete one core course from Cognitive and Systems Neuroscience, one from Cell and Molecular Neuroscience, and one from General Neurobiology, take Bioethics or NURO 801 Issues in Scientific Integrity, and receive training in effective oral communication and teaching by enrolling in one semester of NURO 800 Neuroscience Teaching Principles, which includes a teaching experience.</td>
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<tr>
<td>NURO 811 Issues in Scientific Integrity</td>
<td>Cognitive and Systems Neuroscience</td>
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<tr>
<td>BIOL 701 Topics in: Brain Disorders and Neurological Disorders (3)</td>
<td>NURO 844 Neurophysiology (3)</td>
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<tr>
<td>PSYC 961 Biological Foundations of Psychopathology (3)</td>
<td>NURO 775 Chemistry of the Nervous System (3)</td>
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<tr>
<td>Cell and Molecular Neuroscience</td>
<td>NURO 848 Molecular Mechanisms of Neurological Disorders (3)</td>
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<td>BIOL 673 Cellular and Molecular Neurobiology (3)</td>
<td>General Neurobiology</td>
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<td>NURO 710 Advanced Neurobiology (3)</td>
<td>NURO 846 Advanced Neurobiology (5)</td>
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<tr>
<td>NURO 847 Developmental Neurobiology (2)</td>
<td>NURO 710 Advanced Neurobiology (3)</td>
</tr>
<tr>
<td>Neuroscience Seminar</td>
<td>NURO 799 Seminar in Neuroscience Series (2)</td>
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<tr>
<td>NURO 799 Seminar in Neuroscience Series (2)</td>
<td>Scientific Integrity</td>
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<tr>
<td>NURO 801 Issues in Scientific Integrity (1)</td>
<td>Teaching Experience</td>
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<td>NURO 800 Neuroscience Teaching Principles (2)</td>
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</table>

The Interdisciplinary Neurosciences Program admits students for work on KU’s Lawrence campus or on the KU Medical Center campus in Kansas City.

The KU School of Pharmacy, established in 1885, was the third state university school of pharmacy in the U.S. and is the only pharmacy school in Kansas.
Neurosciences • Pharmaceutical Chemistry

ogy 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 an oral examination on the proposal and on general knowledge in neuroscience and related fields.

I Neurosciences Courses

NURO 710 Advanced Neurobiology (3). The course will build an in depth knowledge about basic mechanisms of synaptic communication among nerve cells and their targets, and the structure and function of nervous systems. Topics will include nervous system development and synapse formation, structure and function of neurons, physiological and molecular basis of synaptic communication between neurons, mechanisms of synaptic plasticity involved in learning and memory, sensory systems (vision, auditory, vestibular, motor reflexes and pain), processing of neural information at cellular and system levels, synapse regeneration and diseases of the nervous system. Prerequisite: BIOL 435 (Introduction to Neurobiology), or consent of instructor. LEC

NURO 775 Chemistry of the Nervous System (3). A detailed study of the molecular aspects of nerve transmission will be covered with special emphasis on the uptake, storage, release, biosynthesis, and metabolism of specific neurotransmitters. Drugs affecting these processes and current research on receptor isolation and neurotransmitter actions will be discussed from a chemical viewpoint. (Same as BIOL 775, CHEM 775, and MDCM 775, and PHCH 775.) Prerequisite: BIOL 600 or equivalent. LEC

NURO 799 Neuroscience Seminar Series (2). Presentations of research papers by faculty, post-doctoral research associates, and graduate students. All graduate students in the Neuroscience program participate throughout their period of training. Each student has to present a seminar once every semester. Presentations by students are evaluated by other graduate students and faculty at the end of each seminar. Prerequisite: Graduate standing in the Neuroscience program. LEC

NURO 800 Neuroscience Teaching Principles (2). This course is to be used by graduate students fulfilling the teaching requirements for the Ph.D. in Neuroscience. The student will function as a discussion leader and lecturer in a limited number of class sessions. Each student will meet with faculty 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. Graded on a satisfactory/unsatisfactory basis. (Same as MDCM 801, PAHX 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 843 Neuroplasticity (3). Somatosensory, motor, and cognitive functions of the brain will be discussed using a combination of lecture and student presentation formats. Current issues and evidence underlying accepted concepts and mechanisms will be emphasized. (Same as PHSL 843.) Prerequisite: PHSL 846 or equivalent and consent of instructor. LEC

NURO 846 Advanced Neuroscience (5). Team-taught, in-depth neuroscience course focusing on normal and diseased brain function at the molecular, cellular and systems levels. Lectures and discussions will emphasize current issues in neuroscience research. (Same as ANAT 846, PHSL 846, and PHCH 846.) Prerequisite: Permission of the course instructor. LEC

NURO 847 Developmental Neurobiology (2). Development of the nervous system from early induction to the development of learning and memory. Topics include: Induction, Cellular Differentiation, Axon Growth and Guidance, Target Selection, Cell Survival and Cell Death, Differentiation and Growth, Synapse Elimination, and Development of Behavior. (Same as ANAT 847 and PHSL 847.) Prerequisite: Advanced Neuroscience (ANAT 846, NURO 846, PHSL 846) or consent of instructor. LEC

NURO 848 Molecular Mechanisms of Neurological Disorders (3). An in-depth coverage of pathogenic mechanisms in neurological diseases: cellular and molecular responses to brain injury and disease, neuroinflammatory diseases (e.g., multiple sclerosis), neurodegenerative diseases (e.g., Alzheimer’s, Parkinson’s, Huntington’s, amyotrophic lateral sclerosis, and prion diseases), genetic diseases (e.g., lysosomal and prion disorders, Down’s syndrome and fragile X), trauma, stroke, and viral diseases (e.g., HIV encephalitis). (Same as ANAT 848, PHSL 848, and PHCH 848.) Prerequisite: Advanced Neuroscience (ANAT 846, PHSL 846, and PHCH 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 and instructor. THE

NURO 999 Neuroscience Doctoral Dissertation (1-11). Hours and credit for this course to be arranged with the mentor. Conduct of original investigation in neuroscience. Prerequisite: Graduate standing in the Neuroscience program post-oral comprehensive examination and consent of mentor/instructor. THE

Pharmaceutical Chemistry

Chair: Christian Schönäich, schoneic@ku.edu
Simons Laboratories, 2095 Constant Ave., Room 236C
Lawrence, KS 66047-3729
www.pharmchem.ku.edu, (785) 864-4880, fax: (785) 864-5736
Graduate Adviser: Jeff Krise, krise@ku.edu
236B Simons Laboratories, (785) 864-2626, fax: (785) 864-5736
Professors: Audus, Borchardt, Lunte, Middaugh, Munson, Schönäich, Siahaan, Stella, Stobaugh, Topp, Verkhivker, Wilson
Professor Emeritus: Schown
Associate Professor: Krise
Assistant Professors: Berkland, Forrest, Laurence

The Department of Pharmaceutical Chemistry is comprised of nationally and internationally recognized senior faculty as well as promising junior faculty specializing in diverse areas of research including physical pharmacy, biopharmaceutics (cellular and molecular), nanotechnology, macromolecular pharmaceutics (pharmaceutical biotechnology), bioanalysis, pharmaceutical analysis, and pharmacokinetics.

The past successes of the department that have allowed it to gain its international reputation as a leader in the pharmaceutical sciences have rested on the shoulders of former graduate students. Realizing this, the department continues to emphasize recruiting and training graduate students as its number one priority. The graduate program thoroughly prepares students for productive careers in the pharmaceutical industry, academia, or government-based institutions. The degree emphasizes training in research, and students work closely with their advisers to develop a doctoral dissertation of high standards. Students also receive strong didactic training. Required core courses provide a comprehensive background in the physical/chemical sciences as they relate to pharmaceutical research. In addition to core courses, students are expected to enroll in a number of electives.

Students are encouraged to explore not only the courses offered by the department but also those offered by other departments, including medicinal chemistry, chemistry, chemical and petroleum engineering, and molecular biosciences, to name a few.

This broad selection allows students to tailor their education to mesh with their specific areas of scientific research and interests.

Admission

Students with a bachelor’s degree or a master’s degree in chemistry, pharmacy, the biological sciences, material sciences, chemical engineering, or related disciplines are encouraged to seek admission. Prospective students should submit an application form along with the fee, transcripts from all undergraduate and graduate institutions attended, recent Graduate Record Examination scores, and Test of English as a Foreign Language scores (if English is not the student’s native language) directly to the Graduate Application Processing Center, www.graduate.ku.edu/GAPC:

The University of Kansas
Graduate Application Processing Center
Strong Hall, 1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

The department also requires three letters of recommendation (no special format) and a personal statement (one page or so) sent either to the address above or directly to this address:

The University of Kansas
Department of Pharmaceutical Chemistry, Attn: Nancy Helm
Simons Laboratories, 2095 Constant Ave.
Lawrence, KS 66047-3729

Although the department does not have a formal application deadline, the faculty begins evaluating applications on January

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in the specific area of scientific interest and research. Two of the three electives must come from the following list of six courses offered by the department:

- PHCH 670 Advanced Pharmaceutical Biotechnology (3 hours, offered every other spring, even years)
- PHCH 674 Pharmaceutical Analysis (tentatively a combination of Pharmaceutical Analysis I and II to be 4 hours, offered every other spring, odd years)
- PHCH 676 Physical Mass Transport (2 hours, offered every other spring, even years)
- PHCH 977 Advanced Topics in Biopharmaceutics and Pharmacokinetics II (2 hours, offered every other fall, even years)
- PHCH 725 Molecular Cell Biology (3 hours, offered every other fall, even years)
- PHCH 715 Drug Delivery (3 hours, offered every other fall, odd years)

The third elective can be one of the courses above or any course offered at KU, if the student and the research advisor agree that the course helps to reduce the student’s deficiencies or exposes him or her to an advanced level of knowledge in a subject that benefits his or her scientific interests and research project.

**Foreign Language or Other Research Skills Requirement.**

Before a student may take the comprehensive written and oral examinations, he or she must complete the FLORS requirement by completing an acceptable skills development course. The FLORS requirement also may serve as the third elective. A list of courses that have been accepted for the FLORS requirement follows. Other courses may be permissible upon approval of the pharmaceutical chemistry FLORS committee.

**Seminar Requirements.** All students must register for PHCH 978 Pharmaceutical Chemistry Seminar. Seminars normally are scheduled for Tuesdays from 11 a.m. to 12 p.m. Seminar attendance is mandatory. If an unavoidable conflict arises, the student should contact the seminar instructor. Students are usually asked to present at least two seminars before graduation, typically, one during the year after completing the qualifying examination and the second shortly before the final dissertation. Students should discuss seminar presentations with their advisers. The seminar typically is based on the progress achieved in their research project. Two students may fill one seminar slot, particularly for those presenting for the first time who may have insufficient data for a complete presentation. This is particularly encouraged as our department grows and the competition for seminar slots increases.

The development of communication skills is an important aspect of graduate training. The ability to present seminars clearly and effectively is an important part of the evaluation process.

**Facilities**

The department is on KU’s west campus in Simons Biosciences Research Laboratories, a state-of-the-art, 30,000-square-foot, two-story research facility completed in 1996. There are 18 general laboratories and an experimental cancer chemotherapeutic-agent testing laboratory, a radioisotope handling room, a molecular biology laboratory, a natural products extraction laboratory, and a liquid chromatography mass spectrometry laboratory. The laboratories contain an extensive array of equipment and instrumentation. The department currently maintains five mass spectrometers. There are facilities for cell culture, several state-of-the-art fluorescence microscopes, NMRs (both solution state and
solid state), and numerous components and software for proteomic analysis. In addition, an extensive array of instrumentation is available for the characterization of both small and macromolecules including a circular dichroism spectrophotometer, FTIR, and light-scattering instrumentation to name a few. An amazing array of equipment and service facilities help with nearly any aspect of research. For example, the Molecular Structures Group (www.msg.ku.edu/~msg) is a campuswide facility encompassing NMR, MS, X-ray crystallography, biochemical service facility, and molecular graphics and modeling laboratories available to all campus members for a nominal fee. Near the Simmons building, the structural biology wing of the MSG houses an 800 MHz NMR along with many other instruments and services. The recently completed Multidisciplinary Research Building houses researchers from a variety of different disciplines to encourage interaction and collaboration. Professors Middaugh, Lunte, Berkland, and Laurence occupy space in this new facility.

### Pharmaceutical Chemistry Courses

**PHCH 510** Emerging Trends in Pharmaceutical Chemistry I (1). Discussion, lectures, and laboratory work designed to acquaint and provide hands-on experiences to advanced undergraduate and graduate students with experimental design, methods, and approaches relevant to modern research in pharmaceutical chemistry. Prerequisite: Consent of instructor. LEC

**PHCH 511** Emerging Trends in Pharmaceutical Chemistry II (1). Lecture and discussions on the latest research in this area and examine more classical delivery methods. A qualitative and quantitative understanding of drug delivery practice and theory is the goal. Prerequisite: Master’s or Ph.D. candidate in Engineering, Chemistry, Medicinal Chemistry, or Pharmaceutical Chemistry (by appointment for seniors or graduate students in departments not listed). LEC

**PHCH 515** 1.  A course on the use of the library as a research tool and the study of bibliographic techniques of literature searching. Emphasis on the literature of pharmaceutical chemistry and industrial pharmacy. LEC

**PHCH 525** Molecular Cell Biology (3). Fundamental and advanced concepts in cell biology and the molecular interactions responsible for cell function, homeostasis and disease will be presented. Current analytical methods for examining cells and their molecular components will be discussed. Emphasis will be placed on the chemical and physical properties of individual proteins, nucleic acids and lipids and their assembly into cellular and subcellular structures. (Same as C&PE 725) LEC

**PHCH 715** 1.  A course on the current research in the conduct of a scientific career, with emphasis on practical topics of special importance in molecular-level research in the chemical, biological, and pharmaceutical sciences. Topics will include the nature of ethics, the scientists in the laboratory, the scientist as author, grantee, reviewer, employer/employee, teacher/student, and citizen. Discussions will focus on case histories. Graded on a satisfactory/unsatisfactory basis. (Same as MATH 320 or equivalent LEC)

**PHCH 745** 1.  A course on the use of the library as a research tool and the study of bibliographic techniques of literature searching. Emphasis on the literature of pharmaceutical chemistry and industrial pharmacy. LEC

**PHCH 725** Molecular Cell Biology (3). Fundamental and advanced concepts in cell biology and the molecular interactions responsible for cell function, homeostasis and disease will be presented. Current analytical methods for examining cells and their molecular components will be discussed. Emphasis will be placed on the chemical and physical properties of individual proteins, nucleic acids and lipids and their assembly into cellular and subcellular structures. (Same as C&PE 725) LEC

**PHCH 745** Advanced Drug Delivery (2). An advanced course focusing on current and future strategies for targeted drug delivery to specific tissue sites. The emphasis of lectures and discussions is on routes of drug permeation across biological barriers; macromolecules, viruses, microparticulates, and cells as drug carriers; and produg delivery systems. Students are required to individually review selected topics. Prerequisite: Graduate standing or consent of the instructor. LEC

**PHCH 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. Defects affecting these processes and current research on receptor isolation and receptor mechanisms will be discussed from a chemical viewpoint. (Same as P&TX 775, BIOL 775, CHEM 775, MDCM 775 and NEURO 775.) Prerequisite: BIOL 600 or equivalent LEC

**PHCH 810** 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 scientists in the laboratory, the scientist as author, grantee, reviewer, employer/employee, teacher/student, and citizen. Discussions will focus on case histories. Graded on a satisfactory/unsatisfactory basis. (Same as MATH 320 or equivalent LEC)

**PHCH 862** Pharmaceutical Equilibrium (3-4). A course on equilibria in aqueous and non-aqueous systems with emphasis on solutions of interest to pharmaceutical technology. Included are association-dissociation equilibria, complexation, protein binding calculations, and other special topics. Estimation of solubility and ionization constants. Methods for the determination of chemical potential in solution are presented. LEC

**PHCH 864** Pharmaceutical Analysis (3). Advanced course on pharmaceutical analysis. LEC

**PHCH 865** Pharmaceutical Analysis II (2). This course is intended to be a comprehensive study of contemporary techniques used to validate analytical methods for the determination of drugs in the bulk form, pharmaceutical formulations, biological samples and other relevant media. The emphasis will be on chromatographic techniques reflecting the preeminent position that those techniques occupy in the field of pharmaceutical and biomedical analysis. Prerequisite: Previous or concurrent enrollment in PHCH 684. LEC

**PHCH 866** Pharmaceutical Mass Transport (2). A course on mass transport problems of pharmaceutical interest. Topics include physiological pharmacokinetic models, diffusive transport, and drug delivery systems. Prerequisite: MATH 320 or equivalent LEC

**PHCH 870** Advanced Pharmaceutical Biotechnology (3). A course designed to emphasize the important facets of recombinant proteins as pharmaceutical agents. Bases of protein structure and analysis will be introduced, and methods for production, isolation, and purification of recombinant proteins will be described. Potential chemical and physical degradation processes and strategies for circumventing these difficulties will be discussed. Prerequisite: BIOL 600 or consent of instructor. LEC

**PHCH 895** Research in Pharmaceutical Chemistry (1-11). Advanced level research in collaboration with a faculty member in pharmaceutical chemistry or related areas. This course is limited to students who are doing research, but not necessarily working toward either a master’s or a doctoral degree. RSH

**PHCH 899** Master’s Thesis (1-11). THE

**PHCH 972** Mechanisms of Drug Deterioration and Stabilization (2-4). A course dealing with mechanisms and chemical kinetics of drug deterioration and stabilization. LEC

**PHCH 974** Advanced Special Topics in Pharmaceutical Chemistry I (3). Various topics pertinent to the area of pharmaceutical chemistry will be explored. Graded on a satisfactory/unsatisfactory basis. LEC

**PHCH 975** Advanced Topics in Biopharmaceutics and Pharmacokinetics I (3). A quantitative treatment of the processes involved with drug absorption, distribution, metabolism, and excretion in living systems. This course open only to distance education students. LEC

**PHCH 976** Advanced Topics in Biopharmaceutics and Pharmacokinetics II (3). A quantitative treatment of the processes involved with drug absorption, distribution, metabolism, and excretion in living systems. This course open only to on-campus students. LEC

**PHCH 977** Advanced Topics in Biopharmaceutics and Pharmacokinetics II (2). A course addressing special topics in biopharmaceutics and pharmacokinetics including complex modeling, treatment of data using computers, cell culture systems, and research topics. LEC

**PHCH 978** Pharmaceutical Chemistry Seminar (1). A seminar on the chemistry of pharmaceutical systems. LEC

**PHCH 990** Postdoctoral Research in Pharmaceutical Chemistry (1-11). Advanced level research in collaboration with a faculty member involving projects in pharmaceutical chemistry or related areas. Prerequisite: Doctoral degree or equivalent in an appropriate related area and consent of instructor. RSH

**PHCH 999** Doctoral Dissertation in Pharmaceutical Chemistry (1-11). THE

### Pharmacology and Toxicology

Chair: Nancy Muma, mmuma@ku.edu
Malott Hall, 1251 Wescoe Hall Dr., Room 5064
Lawrence, KS 66045-7582
www.pharm.ku.edu/pharmtox, (785) 864-4001
Graduate Adviser: Jeff Staudinger, stauding@ku.edu, 5044 Malott Hall, (785) 864-3951
Professors: Dobrowsky, Fowler, E. Michaelis, M. Michaelis, Muma
Courteous Professors: Audus, Decedue, Seifert, Leeder
Associate Professor: Staudinger
Assistant Professors: Kim, Mitchell, Moskovitz

**Admission**

Admission is based on the student’s undergraduate record in a relevant field, Graduate Record Examination scores, and three letters of recommendation. A minimum grade-point average of 3.0 on a 4.0 scale is required. Applications from non-English-speaking countries must include a copy of the Test of English as a Foreign Language score. Acceptance 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 laboratory courses in biochemistry and mammalian physiology. Prerequisites may be completed after admission, with the deficiencies to be corrected as soon as possible.
Submit your application online at www.graduate.ku.edu/GAPC. Send transcripts of all completed college and university course work to

The University of Kansas
Graduate Application Processing Center
Strong Hall, 1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

Send all other requested application materials to

The University of Kansas
Department of Pharmacology and Toxicology
Malott Hall, 1251 Wescoe Hall Dr., Room 5064
Lawrence, KS 66045-7582

M.S. Degree Requirements
The department offers an M.S. degree in pharmacology and toxicology only in special cases where attainment of the Ph.D. is inappropriate. To obtain an M.S. degree, a student must take advanced courses in pharmacology and toxicology and in related fields, including biotechnology. A thesis based on original research generally is required.

Ph.D. Degree Requirements
Course Work. Students must earn credit in the following courses or their equivalents:
P&TX 700 Professional Issues in the Biomedical Sciences
P&TX 725 Biomedical Bibliography
Students must complete 8 credit hours of P&TX 730-P&TX 735 Advanced Pharmacology, consisting of four 2-credit-hour modules.
P&TX 730 Advanced Pharmacology I: Central Nervous System and Autonomic Nervous System
P&TX 731 Advanced Pharmacology II: Cardiovascular and Renal System
P&TX 732 Advanced Pharmacology III: Hematology and Cancer Biology
P&TX 733 Advanced Pharmacology IV: Infectious and Respiratory Diseases
P&TX 734 Advanced Pharmacology V: Endocrinology
P&TX 735 Advanced Pharmacology VI: Metabolism and GI
P&TX 740 Advanced Biotechnology
P&TX 742 Experimental Pharmacology
P&TX 747 Molecular Toxicology
P&TX 799 Pharmacology and Toxicology Seminar
P&TX 800 Pharmacology and Toxicology Teaching Principles
P&TX 801 Issues in Scientific Integrity
BIOL 841 Biometry I

Students also must complete 3 credit hours of advanced graduate work in an elective course.

On passing the comprehensive oral examination, an aspirant for the Ph.D. degree becomes a candidate, and a dissertation committee is appointed. The dissertation committee normally consists of five members of the graduate faculty. Three members of the committee must be pharmacology and toxicology faculty members.

Research Skills Requirement. In consultation with the adviser, each student develops research skills relevant to the chosen research program. A great deal of flexibility is allowed in selecting the research skills. All graduate students must complete training in an area that can become useful in future research design and data analysis. Representative areas for such training are computer science; statistical methodology; cellular imaging techniques; histochmistry and cytochemistry; tissue culture methods; radioisotope techniques; methods in immunology, molecular biology, or protein chemistry; bioinformatics; 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.

Pharmacology and Toxicology Courses

P&TX 625 Pharmacology I (4).
P&TX 630 Pharmacology I (4).
P&TX 631 Pharmacology II (4).
P&TX 632 Pharmacology III (4).
P&TX 633 Pharmacology IV (3).
P&TX 640 Toxicology (2).
P&TX 641 Antibiotics: Benefits and Risks (1).
P&TX 642 Obesity, Diabetes, and Metabolic Syndrome: Current Concepts (1).
P&TX 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. Prerequisite: Graduate standing in pharmacology and toxicology. LEC

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 (1). The use of the library as a research tool and the study of bibliographic techniques of literature searching. Emphasis on pharmacological, physiological, biochemical, and medical literature. Graded on a satisfactory/unsatisfactory basis. Prerequisite: Graduate standing. LEC

P&TX 730 Advanced Pharmacology I (2). A detailed study of the fundamentals of autoimmune disease and the immune system, and their pharmacology. The student will attend P&TX 632 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

Pharmacology & Toxicology
Pharmacology & Toxicology • Takeru Higuchi & Nigel Manning Intersearch Ph.D. Program

P&TX 731 Advanced Pharmacology II (2). A detailed study of the fundamentals of cardiovascular system and pharmacology. The student will attend P&TX 632 lectures and meet separately with the faculty for additional discussions of advanced material on the topics. The students will be examined on the advanced material. Prerequisite: Graduate standing in pharmacology and toxicology.LEC

P&TX 732 Advanced Pharmacology III (2). A detailed study of the fundamentals of hematology, cancer biology and their pharmacology. The student will attend P&TX 631 lectures and meet separately with the faculty for additional discussions of advanced material on the topics. The students will be examined on the advanced material. Prerequisite: Graduate standing in pharmacology and toxicology.LEC

P&TX 733 Advanced Pharmacology IV (2). A detailed study of the fundamentals of infectious diseases, respiratory diseases and their pharmacology. The student will attend P&TX 631 lectures and meet separately with the faculty for additional discussions of advanced material on the topics. The students will be examined on the advanced material. Prerequisite: Graduate standing in pharmacology and toxicology.LEC

P&TX 734 Advanced Pharmacology V: Endocrinology (2). A detailed study of the fundamentals of endocrinology and associated pharmacology. The student will attend P&TX 631 lectures and meet separately with the faculty for additional discussions of advanced material. Prerequisite: Graduate standing in pharmacology and toxicology. LEC

P&TX 735 Advanced Pharmacology VI: Metabolism and GI (2). A detailed study of the fundamentals of energy metabolism and obesity, gastrointestinal pharmacology, and vitamins. The student will attend P&TX 635 lectures and meet separately with the faculty for additional discussion 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 (3). An examination of basic principles of molecular biology, immunology, and protein chemistry as they apply to the identification, production, stability, delivery, and monitoring of new therapeutic agents provided by the expanding biotechnology industry. Students will attend lectures in P&TX 633 and meet separately with the faculty for additional discussions of advanced material on these topics. The students will be examined on the advanced material. Prerequisite: Graduate standing in Pharmacology and Toxicology Program. LEC

P&TX 742 Experimental Pharmacology (4). Experimental approaches to understanding mechanism of drug action. Use of drugs as tools to understand functioning of biological systems. Historically important experiments are discussed along with experiments which are currently used to define drug mechanisms. Topics will include: dose-response, drug receptors, drug metabolism, chemotherapy, and autonomous CNS, cardiovascular and renal pharmacology. (Same as MDCM 742.) Prerequisite: BIOL 600 and BIOL 726 or equivalent, or consent of instructor. LEC

P&TX 747 Molecular Toxicology (4). The molecular basis involved in the poisoning and detoxification process will be covered. Topics will include drug metabolism and disposition, chemical, genetic, and developmental toxicology. Prerequisite: BIOL 600, BIOL 762 or equivalent, or consent of instructor. LEC

P&TX 775 Chemistry of the Nervous System (3). A detailed study of the molecular aspects of nerve transmission will be covered with special emphasis on the uptake, storage, release, biosynthesis, and metabolism of specific neurotransmitters. Drugs affecting these processes and current research on receptor isolation and receptor mechanisms will be discussed from a chemical viewpoint. (Same as BIOL 775, CHEM 775, and MDCM 775.) Prerequisite: BIOL 600 or equivalent. LEC

P&TX 799 Pharmacology and Toxicology Seminar (1-2). A review of current literature and research in pharmacology and toxicology. Required of all graduate students in the department every fall and spring semester. Prerequisite: Graduate standing in P&TX. LEC

P&TX 800 Pharmacology and Toxicology Teaching Principles (2). This course is to be used by graduate students fulfilling the teaching requirements for the Ph.D. in pharmacology and toxicology. The student will function as a discussion leader and lecturer in a limited number of class sessions. Each student will meet with the faculty whom he or she is assisting. Prerequisite: Graduate standing in pharmacology and toxicology program. RSH

P&TX 801 Issues in Scientific Integrity (1). Lectures and discussion on ethical issues in the conduct of a scientific career, with emphasis on practical topics of special importance in molecular-level research in the chemical, biological, and pharmacological sciences. Topics will include the nature of ethics, the scientist in the laboratory, the scientist as author, grantee, reviewer, employer/employee, teacher, student, and citizen. Discussions will focus on case histories. Graded on a satisfactory/unsatisfactory basis. (Same as MDCM 801, NURO 801, 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. THE

P&TX 901 Seminar: Psychotropic Drugs Across the Life Span (3). Through the use of both traditional didactic and student participatory instructional methods, the seminar will address basic pharmacological concepts (i.e., assimilation, distribution, elimination, dose-effect analyses, kinetics, etc.), neuropharmacological principles (i.e., neuronal mechanisms of action of psychotropic drugs, animal models of human psychiatric disorders, etc.), and therapeutics (i.e., drug treatment of 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. Graded on a satisfactory/unsatisfactory basis. Prerequisite: Doctoral degree or equivalent in an appropriate related area, and consent of instructor. RSH

P&TX 999 Doctoral Dissertation (1-11). Hours and credit to be arranged. Original investigation in pharmacology and toxicology. Prerequisite: Consent of instructor. THE

Takeru Higuchi and Nigel Manning Intersearch Ph.D. Program

Chair: Valentino J. Stella
Simons Laboratories, 2095 Constant Ave., Room 121B
Lawrence, KS 66047-3729
www.hbc.ku.edu/phch/takeru.htm, (785) 864-4820

Professors: Borchardt, Chapman (Australia), Groenewald, 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. Pharmacologists and toxicologists work on the cutting edge of new developments in the biomedical sciences through jobs in academia, the biotechnology/pharmaceutical industry, and federal research institutes.

The Center for Biomedical Research combines several biomedical research units that have brought KU to international prominence in this field.
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See pages 12-14 for admission procedures.

Application fees: Domestic Ph.D. students in social welfare: paper $55, online $45.
International Ph.D. students in social welfare: paper $60, online $55.

Major themes of the KU School of Social Welfare include the Strengths Perspective, a practice-centered curriculum, a critical perspective, and a commitment to social justice.
Doctor of Philosophy

Mary Ellen Kondrat, Dean
Twente Hall, 1545 Lilac Lane, Room 107
Lawrence, KS 66044-3184

Rick Spano, Associate Dean, Academic Programs
7 Twente Hall, admissionsmsw@ku.edu
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203 Twente Hall, admissionsw-phd@ku.edu

www.socwel.ku.edu
Phone: (785) 864-4720, Fax: (785) 864-5277

Professors: Berry, Canda, Chapin, Ezell, Kondrat, Lieberman, McDonald, Petr, Rapp
Associate Professors: Adams, Banerjee, Beverly, Holter, Kapp, Messinger, Nelson-Becker, Peterson, Scanlon, Severson, Spano
Assistant Professors: Archer, Bhuyan, Crisp, Kim, Koenig, Shim, Wall

Doctor of Philosophy

Challenging ideas and creative thinking are happening at KU’s School of Social Welfare, which is consistently ranked in the top 10 of public university programs. Our doctoral program prepares students to be leaders of the profession through their advanced research, scholarship, and teaching. Our school is known internationally as a prime motivator in the Strengths Perspective for social work practice. Doctoral students have played a key role in this exciting initiative.

Program Highlights

• Creative, Critical Thinking about Practice, Policy and Theory
• Quantitative and Qualitative Skills for Research
• Innovative Scholarship and Teaching
• A Student-Centered Educational Approach
• Financial Supports and Mentoring for Students
• Full and Part Time Enrollment Options
• Personal and Community Strengths
• Appreciation for Human Diversity and Global Perspective
• Social Justice

Our students become conversant with the excitement and creativity in the profession - how professionals come to know what they know, how they put that knowledge into practice, and how it affects consumers.

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.

Curriculum

Our courses prepare students as scholars with conceptual and methodological sophistication.

• History/philosophy courses focus on the intellectual history and current status, and innovation of social work ideas, ideologies, and theories.

• In the research sequence, students learn both qualitative and quantitative methodologies, designs and advanced modes of analysis, and appropriate applications.

• 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.

• Qualifying papers and electives help students develop deep understanding in their areas of special interest.

• Seminars on teaching enable students to be effective educators.

• The dissertation involves advanced and focused research into a topic selected by the student, based on quantitative, qualitative, historical, or other methods of inquiry.

Ph.D. Admission

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.

Qualifications for Admission. To be considered for admission, an applicant must meet the following requirements:

1. Minimum 3.5 graduate grade-point average required.
2. M.S.W. degree preferred. Applicants with master’s degrees related to social work and affiliation with social work activities and values are considered.
3. Completion of the Graduate Record Examination within the past five years. Scores in at least the 50th percentile in two of the three test areas are preferred.
4. Basic statistical competence as demonstrated by completion of a basic statistics course at the graduate or undergraduate level with a grade of B or above within the last five years or plan to complete the course.
5. Two years of social work or related practice; two years of post-master’s professional social work experience is preferred.
6. Ability for doctoral study in social work, demonstrated by a written statement of interests in research relevant to social work. Letters of recommendation, and scholarly or other professional achievement as indicated in a curriculum vitae and publications, if available.
7. Demonstrated ability for and interest in advanced scholarship and revision of existing bodies of knowledge.
8. For international students, completion of the Test of English as a Foreign Language within the past two years, demonstrating high proficiency.
9. Other general requirements.

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.

See our Web site, www.socwel.ku.edu, or write to The University of Kansas School of Social Welfare, Doctoral Program, Twente Hall, 1545 Lilac Lane, Room 107, Lawrence, KS 66044-3184, admissionsw-phd@ku.edu, or contact program director Ed Canda at edc@ku.edu.

Diversity and cultural variation among the student body are highly valued.
Application Procedure. Complete the Application for Admission and Supplemental Application online at www.graduate.ku.edu/GAPC. Send one official copy of all undergraduate and graduate transcripts to

The University of Kansas
Graduate Application Processing Center
Strong Hall, 1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

In addition, the following materials must be sent directly to the School of Social Welfare:

- Graduate Record Examination scores
- Letters of reference
- International students: Test of English as a Foreign Language scores
- Copies of scholarly work, such as journal articles, papers delivered, research reports, monographs, if any
- 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

Applications are not reviewed until all materials are received. The deadline is May 1. Late applications are considered only on a space-available basis.

To allow time for consideration for financial assistance through assistantships, applications should be completed as early as possible, no later than May 1. Applications completed by November 15 receive priority for possible graduate fellowships. All application materials become the property of the University of Kansas and are not returned.

International Students. International students from all regions of the world are encouraged to apply. Our program offers free academic English writing skills tutoring to international students for whom English is a second language. Contact the school at the e-mail address below for more information about international student applications and regulations of International Student and Scholar Services and the Applied English Center.

Application Timeline. To allow time for consideration for financial assistance through research and teaching assistantships, applications must be completed by May 1. Late applications are considered only on a space-available basis. Earlier applications receive priority for admission and funding. For specific admission requirements, see our Web site or write to

The University of Kansas
School of Social Welfare, Doctoral Program
Twente Hall, 1545 Lilac Lane, Room 107
Lawrence, KS 66044-3184

Telephone: (785) 864-8976
Doctoral Director: Edward Canda, (785) 864-8939
E-mail: admissionssw-phd@ku.edu
Web site: www.socwel.ku.edu/admissions/PhD

Financial Aid

Financial assistance, including tuition and significant salary, is available from the school through teaching and research assistantships in a variety of research and training areas such as mental health, aging, child welfare, corrections, social policy, spiritual diversity, or other areas of faculty grants and interests. Due to more than $6 million in research grants, most of our doctoral students are able to obtain funding. To apply for financial support, you should so indicate on the application form and submit the application early. Apply by November 15 for graduate fellowship consideration.

Teaching and Research

The 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, diversity issues, domestic violence, 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 experience 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. Degree Requirements

The program requires a minimum of 54 credit hours. This total includes 24 hours of required courses, 12 hours of electives, qualifying papers, a comprehensive exam process, and the dissertation. In fulfilling elective hours, students may take graduate-level courses in any substantive area or research skills necessary for successful completion of their goals. Students can meet this requirement by taking electives in social science or other relevant disciplines. Before students are certified as eligible to proceed to candidate status, they must complete course requirements, qualifying papers, and a dissertation proposal.

Required course work can be completed in two years. Committing for one or two days per week is possible. Additional time is needed to complete the qualifying papers and dissertation. The program can be completed in 3-4 years of focused work. Students may start on a part-time basis but eventually must spend one year in residence, which entails two semesters of full-time course work (12 hours) and may include one summer session (6 hours); or a combination of 6 hours course work and half time appointment as a teaching or research assistant for two semesters.

Doctoral Courses (54 credit hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SW 979</td>
<td>Methods of Naturalistic and Qualitative Research</td>
<td>3</td>
</tr>
<tr>
<td>SW 980</td>
<td>History and Philosophy I</td>
<td>3</td>
</tr>
<tr>
<td>SW 981</td>
<td>Advanced Research Methods I</td>
<td>3</td>
</tr>
<tr>
<td>SW 982</td>
<td>Social Policy Analysis</td>
<td>3</td>
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<tr>
<td>SW 983</td>
<td>Advanced Research Methods II</td>
<td>3</td>
</tr>
<tr>
<td>SW 984</td>
<td>Social Work Practice</td>
<td>3</td>
</tr>
<tr>
<td>SW 985</td>
<td>History and Philosophy II</td>
<td>3</td>
</tr>
<tr>
<td>SW 986</td>
<td>Research Practicum</td>
<td>3</td>
</tr>
<tr>
<td>Substantive electives</td>
<td></td>
<td>12</td>
</tr>
<tr>
<td>SW 999</td>
<td>Dissertation</td>
<td>18</td>
</tr>
</tbody>
</table>

Master of Social Work

The Master of Social Work degree prepares graduates for advanced social work practice in one of two broad areas—clinical social work practice with individuals, families, and groups or social work administrative and advocacy practice aimed at macro-level practice. The first level of the master’s curriculum is a generalist foundation required of all students. The foundation consists of six classroom courses and a two-semester practicum that reflects the generalist intent.

At the advanced level, students choose a concentration in clinical social work practice with a focus in a particular field of practice (child and family, health/mental health, aging, school social work) or social work administrative and advocacy practice. The advanced-level practicum implements students’ choice of concentration.

Full-time students complete the program in two years. Students admitted for part-time study may extend the program for up to four years.

The Advanced-standing program admits individuals with B.S.W. degrees with strong 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
Master of Social Work

years. On KU’s Edwards campus, part-time students can complete the M.S.W. curriculum in afternoon, evening, and Saturday classes.

**M.S.W. Admission**

Two-year Full-time or Part-time Program. Applicants must have bachelor’s degrees from accredited universities before the start of the M.S.W. course and field work. Applicants’ undergraduate studies must reflect the successful completion of liberal arts courses, including those in the social sciences and humanities which focus on the development of knowledge in communication; social, biological, and behavioral sciences; history; philosophy, and the ways in which knowledge is gained and applied; and the value of a multicultural and diverse society.

**Advanced-standing Criteria.** The Advanced-standing program requires a bachelor’s degree from a CSWE-accredited social work program with a grade-point average of at least 3.0. A higher grade point is desirable. Applicants who earned their social work bachelor’s degrees within the two years before applying to the M.S.W. program must submit a copy of their practicum evaluation as well as a letter of recommendation for graduate studies completed by one of their practice instructors. In addition, all applicants who have been employed in a social work setting should submit a letter of recommendation from at least one supervisor who can address the applicant’s knowledge, skill, and readiness for graduate education.

Admissions decisions take into account the applicants’ amount and types of social service experience, letters of recommendation, and undergraduate grade-point averages and courses completed.

The Advanced-standing program is a full-time, one year program. Under special and limited circumstances, a part-time program may be allowed, providing the students’ plan for part-time study is consistent with 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 their successful practicum experience. All applications to either the two-year or the Advanced-standing program become the property of the University of Kansas.

**Application Procedure for All Options.** A minimum undergraduate grade-point average of 3.0 on a 4.0 scale is required. The admissions committee takes into account special circumstances such as improvement of grades in upper-division or graduate courses. We look for evidence of an applicant’s commitment to the well-being of people and communities; a well-developed sense of self; emotional maturity and the ability to think clearly, creatively, and independently. Graduate Record Examination scores are not required.

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.

Applications can be filled out and submitted online at www.socwel.ku.edu beginning October 1 each year. The applicant is responsible for gathering the following supporting materials and submitting them in one envelope: one copy of student-issued transcripts from all previously attended schools regardless of degree status, three letters of references on forms provided, and a non-refundable application fee of $25 for online applications or $45 for paper applications. Applicants submitting paper applications also must include the School of Social Welfare application and a narrative statement. Please observe the specific instructions provided in application packets and on our Web site.

Applications are reviewed beginning in October. Admissions 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 who submit paper applications by December 1, the application fee is waived.

To ensure your privacy, we are unable to provide admission decisions by telephone. All applicants are notified in writing.

All application materials become the property of the University of Kansas.

**Planning Your Commitment.** Students are admitted on either a full- or a part-time basis. In making decisions about full- or part-time study, students should consider that each class requires several hours of preparation each week. The program is demanding; students can expect reading assignments and paper preparation and should be prepared to fulfill practicum commitments averaging two-and-one-half to three days per week. Students admitted part time take 6 credit hours each semester the first year. Full-time students enroll in 16 credit hours each semester. Currently, the M.S.W. program is a weekday program. Late-afternoon, evening, and Saturday courses are offered on the Edwards Campus.

**M.S.W. Degree Requirements**

The School of Social Welfare requires a total of 64 credit hours for the M.S.W. degree, consisting of:

- Thirty-six credit hours of classroom work maintaining a grade-point average of 3.0 (B) — a total of 108 grade points on a 4-point grading system
- Twenty-eight credit hours of field practicum with an S grade for satisfactory performance
- Two sequential semesters of 10-credit-hour enrollments are necessary to meet residence requirements
- Recommendation of the faculty of the School of Social Welfare to the registrar that the master’s degree be granted

*Students who maintain grade-point averages of at least 3.0 in the foundation courses are eligible to take additional courses beyond the minimum requirement.

**M.S.W. Foundation Curriculum**

**Social Work Practice (SW 710, SW 711).** Based on the school’s unique strengths perspective, courses provide core knowledge and skills essential for working with individuals, families and groups.

**Community and Organizational Practice (SW 713).** This practice class gives students an understanding of the core elements of practice in organizations and communities.

**Social Policy and Program Analysis (SW 720).** Course emphasizes the effect of social problems, policies, and programs on people and gives students the skills to analyze the effectiveness of policies and programs.

**Human Behavior In the Social Environment (SW 730).** Theoretical underpinnings essential for effective social work practice and for understanding the behavior of individuals, families, groups, and communities.

**Social Work Research (SW 740).** Course offers students the opportunity to become informed consumers of social-work-relevant research and to develop skill in evaluating the effectiveness of their own work with clients and the effectiveness of the programs in which they work.

**Field Practicum (SW 701).** Community agencies throughout Kansas and western Missouri offer practicum opportunities for the application of knowledge gained in other sequences. Field experiences for foundation-level students extend the curriculum goal of generalist social work and are designed so that fundamental skills across multiple levels of intervention are acquired.

**Foundation Courses.** The following courses are required (32 credit hours):

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Master of Social Work

**Semester 1 (36 credit hours)**

SW 701 Basic Field Practicum ...................................................... 7
SW 710 Social Work Practice I ..................................................... 3
SW 713 Community and Organizational Practice ......................... 3
SW 720 Social Policy and Program Analysis ................................ 3

**Semester 2 (36 credit hours)**

SW 701 Basic Field Practicum ...................................................... 7
SW 711 Social Work Practice II ..................................................... 3
SW 730 Human Behavior in the Social Environment ..................... 3
SW 740 Social Work Research ..................................................... 3

**M.S.W. Advanced-level Curriculum**

Students at the advanced level select a concentration in either clinical social work practice or social work administrative and advocacy practice. This selection is based on their goals of working directly with individuals, families, and groups or at the macro-level of practice in advocacy and community practice. Students may not enroll in advanced-level classes before completing foundation requirements.

**Clinical Social Work Concentration** (32 credit hours). This concentration prepares students for social work practice with individuals, families, and small groups. The focus of the student’s academic preparation is twofold: on developing the assessment skills needed to identify the client’s personal, interpersonal, environmental and/or systems needs; and on selecting, in concert with the client, appropriate interventions that are evidence-based and supported as best practices. Students are exposed to social work theories and methods applicable to the range of practice settings in which clinical social work services are provided and simultaneously have the opportunity to apply this developing knowledge in the field education component of their graduate programs. Students who anticipate seeking the Licensed Specialist Clinical Social Worker (LSCSW) examination should enroll in the clinical social work practice concentration.

**Semester 3**

SW 801 Advanced Field Practicum: Clinical Practice ................. 7
SW 810 Clinical Social Work Practice ......................................... 3
Integrative Seminar ..................................................................... 3

Students must select an integrative seminar that complements the advanced field practicum. Courses include SW 830 Social Work in Child and Family Settings, SW 832 Social Work in Health Care and Mental Health Settings, and SW 833 Social Work and Aging.

Diversity Selective ....................................................................... 3

This cluster of courses is organized around understanding diversity and applying that understanding to specific populations of people who have been marginalized and oppressed.

**Semester 4**

SW 801 Advanced Field Practicum: Clinical Practice ................. 7
SW 811 Topics in Advanced Clinical Social Work: ..................... 3
  (Clinical Practice Selective) This selection of offerings emphasizes application of advanced theoretical and practice principles to client systems.

Clinical Practice Electives ......................................................... 6
The clinical practice electives offer students an opportunity to acquire in-depth knowledge in a core area of clinical social work practice.

For students expecting to sit for the LSCSW license in the future, at least one of the clinical electives must meet the BSBP requirement for diagnosis and treatment. Those interested in school social work should take SW 834 as one of their elective courses.

**Social Work Administrative and Advocacy Practice Concentration** (32 credit hours). The curriculum prepares graduates for management positions in public and voluntary human services organizations. The concentration helps students achieve competence in managerial and advocacy practice grounded in the knowledge and values of social work. Knowledge and skill areas include program design, managing information, managing people, managing resources, community advocacy, and program evaluation. This concentration prepares students to be program managers, supervisors, agency administrators, program monitors, advocates and evaluators, and social planners with voluntary health and welfare planning agencies, federal, state, and local planning bodies; and advocacy and self-help organizations.

**Semester 3**

SW 804 Advanced Field Practicum: Social Work Administration ...... 7
SW 840 Social Program Design and Management ....................... 3
SW 841 Advanced Policy and Programs ....................................... 3
SW 849 Mastering the Use of Financial Records for Social Work Practice .................................................. 3

**Semester 4**

SW 804 Advanced Field Practicum: Social Work Administration ...... 7
SW 842 Using Outcomes for Administrative and Advocacy Practice .................. 3
SW 843 Strengthening Staff Performance in a Diverse Workplace .................. 3
Advanced Administrative Practice Selective ....................................... 3

This selective extends and deepens students’ skills and knowledge in administrative practice and expands their expertise in client-centered change at the community and organizational level.

**Field Practicum**

The field education office works with community agencies throughout Kansas and western Missouri to provide field education opportunities for students. Students are placed in these agencies through a collaborative process between the office, the student and the community agency. The field education office is responsible for ensuring that all field placements are able to provide the appropriate learning opportunities for students and that qualified field instructors will be available to the student. The field education office arranges all placements. Students have two practicum placements, one during the foundation level and one during the advanced level of the program. Each placement is for two consecutive semesters, 14 credit hours per year. Foundation level students engage in practicum for 20 hours a week, for a two-semester period of 30 weeks for a minimum of 600 clock hours. Advanced-level students spend 24 hours a week in practicum for a two-semester period for a minimum of 720 clock hours. In both years, the practicum is concurrent with required practice courses. Practicum is graded on an S/U basis. A satisfactory (S) grade in both the foundation and advanced level practicum is a requirement for the M.S.W. degree. At the end of the first semester, a grade of P is given for satisfactory progress toward completion of the course. No credit is given for partial completion fewer than 14 credit hours) of either practicum.

The foundation-level practicum provides the necessary learning opportunities for the achievement of foundation curriculum objectives and development of a generalist perspective on practice. Advanced-level practicum provides the learning opportunities essential for completing the learning objectives of either the clinical or social work administrative and advocacy concentrations. Clinical concentration practica are linked to integrative seminars in the following fields of practice: children and families, health/mental health, or aging. An orientation is held in the fall, before the beginning of classes, for all students entering a field practicum and the field liaisons who represent the school. The Field Education Handbook explains practicum-related expectations and policies. Students are responsible for the material in the handbook.

Graduate social work education has been offered at KU for more than 50 years, longer than any other institution in the state.

Scholarships made possible through donations to the KU Endowment Association are available to M.S.W. students.

M.S.W. application fees: paper $45, online $25.
Every student in practicum has both an M.S.W. practicum instructor and a field liaison. The practicum instructor is responsible for designating learning opportunities, planning practicum assignments, and serving as the student’s teacher in the practicum. The field liaison is employed by the School of Social Welfare to work with practicum instructors and students in each agency, to help integrate practicum and class instruction, to evaluate student performance, and to assist if difficulties arise.

Field placements are mainly in the Kansas City, Topeka, and Wichita areas, with a limited number of settings in Lawrence, Leavenworth, and other Kansas and Missouri communities. Most agencies also require a student to have transportation available for agency assignments. Students are responsible for transportation to the assigned field practicum.

Because of the necessity for continuity in both client service and learning, the maximum time for a break between semesters is three weeks, regardless of time allowable according to the university calendar.

**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 field education, 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, a way for employers to get more hours and learning, the maximum time for a break between semesters is three weeks, regardless of time allowable according to the university calendar.

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 applications forms and guidelines are available from the field education office. To be considered, the completed EBP application must be submitted to the field education 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.

**Joint Degree in Social Work and Law**

The Juris Doctor/Master of Social Work joint degree program combines into four years of study the three-year J.D. program offered by the School of Law and the two-year M.S.W. degree offered by the School of Social Welfare. The social work practitioner gains an understanding of the legal environment in which he or she works and its impact on social problems. The legal practitioner learns how social problems shape the law. Applicants must apply to and meet the criteria for admission to both schools. Contact each school for separate admission information.

**School Social Work**

The Kansas Department of Education no longer certifies school social workers. However, the School of Social Welfare strongly recommends that students interested in practicing in a school setting take the following:

- A practicum experience at the advanced level in a public school setting under the direct supervision of a school social worker
- Clinical social work concentration
- SW 834 Social Work in Schools as one clinical elective
- SPED 725 is highly recommended as an elective choice for students planning a future in school social work.

**Policies and Regulations**

**Credit for Course Work Taken Outside the School of Social Welfare**

Clinical students who wish to substitute a course taken outside the School of Social Welfare for a clinical elective must petition the clinical committee before the beginning of the semester (for fall, August 1; for spring, December 15). Petitions must include the course syllabus, verification that the course is a graduate course, and a transcript upon completing the course showing a grade of B or higher. Requests submitted after the beginning of the semester will not be considered. Students who choose field placements that require particular course work are responsible for meeting the academic requirements of the school as well as the field agency. No more than 3 hours of course work taken outside the school will be accepted to meet the elective program requirement.

Social work administrative and advocacy practice students interested in taking a course offered outside the program must consult the chair of the social work administrative and advocacy practice committee.

Credit for continuing education institutes and workshops or programs conducted by non-accredited 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, a syllabus for each course for which credit is being requested, 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 our of some required foundation courses. Applications for transfer must be received by January 15.

**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
Policies & Regulations • Financial Aid • International Students • Social Welfare Courses

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 successfully completing at least one semester. Students may intermit for 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 spring semester.

Any student who is considering intermit status or withdrawal from the program 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 must also drop SW 701 Basic Field Practicum and SW 710/711 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.

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, financialaid@ku.edu. Financial aid for Lawrence and Kansas City is processed through the Lawrence campus office.

The Free Application for Federal Student Aid must be filed for you to be eligible for loan and grant programs administered by KU. The FAFSA is available online at www.fafsa.edu.gov. Start the process early, before you know your admission status.

A small number of advanced-level field practicum placements may pay a stipend to students. Effort is made to assign these settings to students whose financial need is high.

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
- Dot Simmons and Dodie Abbot Scholarships
- Esther Twente Scholarships
- Mildred Webb Sigler Scholarship
- School of Social Welfare Advisory Board Scholarships
- And others

Awards for outstanding field practicum performance are given annually in recognition of Margaret Schutz Gordon, Director of Practicum, 1970-1983.

William and Monte Murphy Fellowships are available based on need. William Palm Fellowships are available based on need to students of underrepresented ethnic groups. Students must be in good academic standing. The FAFSA must be filed as part of the application process.

International Students

All students from abroad, including students from English-speaking countries, must visit KU’s Applied English Center for verification of English language skills. You may be required to take an English Language Proficiency Test and to enroll in English language courses if you do not pass that test.

Note: The need to take English courses may delay your start or extend the length of the M.S.W. program.

If you are admitted to the M.S.W. program, your admission to the School of Social Welfare will be provisional. You will need to visit the KU International Student and Scholar Services Office, Strong Hall, 1450 Jayhawk Blvd., Room 2, Lawrence, KS 66045-7535, iss@ku.edu, for your I-20 documentation. You must also visit the Applied English Center, Lippincott Hall, 1410 Jayhawk Blvd., Room 204, Lawrence, KS 66045-7515, acc@ku.edu.

The International Conference on Social Welfare recommends that before seeking professional education for social work in the United States, a student should complete comparable study available in his or her own country and acquire a minimum or two years of social work experience there.

International students also must submit

1. Original bank statements showing evidence of your and/or your sponsor’s financial ability to pay your educational and living expenses. Adequate health insurance coverage also is required.

2. Evidence of having taken the Test of English as a Foreign Language (TOEFL) examination within the past two years. Minimum scores are subject to change. Please visit the application area of our Web site for the latest minimum scores.

3. One official, original-language copy of your academic records with a certified English translation.

Social Welfare Courses

SW 701 Basic Field Practicum (4-14). Students are assigned to social service agencies that provide generalist-practice opportunities that prepare students for entry in an advanced level in either clinical social work practice or social work administration. 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 710 and SW 711. FLD 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 frame of reference. Course taken concurrently with SW 701 which provides students an opportunity to integrate theory and practice in work with clients. LEC SW 711 Social Work Practice II (3). Second of two-course sequence extends the work begun in SW 710. Focus in the second course is on mastery of the basics of helping relationships and the development of intervention skills for the middle and ending phases of intervention. Content is structured to prepare students to enter the advanced level of the M.S.W. program. Course taken concurrent with SW 701. Prerequisite: SW 710.

KU’s Master of Social Work program is tied for eighth in the nation, according to U.S. News & World Report’s “America’s Best Graduate Schools” rankings for 2007.

SW 712 Social Work Practice Seminar (3). Introduces advanced standing students to the theoretical and practical orientations of social workers. Students are exposed to a multicultural approach to practice, and developing the skills to critically and reflectively think about one’s own practice. Advanced standing status required. LEC

SW 713 Community and Organizational Practice (3). Students will be exposed to a body of knowledge and skills necessary to practice with communities and organizations. An agency 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 foundational knowledge about bio-psycho-social aspects of individual and family behavior. Theoretical perspectives on well being, dysfunction, and developmental processes are analyzed critically, especially concerning applicability to social work practice that supports client strengths, diversity, and social justice. A holistic conceptual framework is used to integrate these micro-system perspectives with larger environmental socio-political concerns. LEC

SW 740 Social Work Research (3). An examination of professionally relevant aspects of the nature of science: the nature of knowing, a constructed reality, the logic of explanation and inquiry, the nature of concepts, hypotheses, and assumptions. The content will include research design and development, 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, Family Violence. LEC

SW 801 Advanced Field Practicum: Clinical Practice (7-14). Students are assigned to social service agencies that provide opportunities for advanced level social 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 (7-14). Students are assigned to social service agencies that provide practice opportunities in social work administration. All students work under the supervision of a qualified field instructor where they have the opportunity to develop beginning competence in social work administration. This course is generally taken for two semesters, with credit being given only after completion of the second semester. Open only to Advanced-level M.S.W. students. Enrollment in fall semester must be concurrent with enrollment in SW 840, SW 841, and SW 849 and in spring semester enrollment must be concurrent with enrollments in SW 842 and SW 843. Prerequisite: Completion of all foundation requirements. FLD

SW 810 Clinical Social Work Practice (3). Clinical social work practice occurs in a variety of settings, from large public and private agencies and institutions through many types of individual and group practice situations. This course is designed to teach advanced knowledge and skills that transcend contextual factors in order to produce a variety of positive client outcomes in a range of practice situations. In addition, this course focuses on the commitment of social work practitioners to provide services to those groups who, by reason of class, race, sex, or other characteristics, are not ordinarily well served by the many institutions in this society. Course taken concurrently with SW 801 which provides an opportunity to integrate theory and practice in work with clients. Prerequisite: Completion of all foundation requirements. LEC

SW 811 Topics in Advanced Clinical Social Work: _______ (3). The organizing theme of the advanced clinical selective emphasizes application of advanced theoretical and practice principles to client systems. This advanced selective provides students with the opportunity to critically consider the themes of the school as they relate to the 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 workforce. Topics offered may include strengths-oriented, solution-focused brief therapy; narrative therapy; ego-psychology from a strengths perspective; social work practice and families. Prerequisite: Completion of SW 810. LEC

SW 830 Social Work in Child and Family Settings (3). An in-depth examination of social work in child and family settings. Students will demonstrate the capacity to integrate research, policy, direct practice, and human behavior in considering the issues central to this area of practice. Students will also be able to explain how diversity issues manifest themselves at both the policy and direct practice levels. Prerequisite: Completion of all foundation requirements. LEC

SW 832 Social Work in Health Care and Mental Health Settings (3). Content as in SW 830 focused on health care and mental health. LEC

SW 833 Social Work and Aging (3). Content as in SW 830 focused on aging. LEC

SW 834 Social Work in Schools (3). Content as in SW 830 focused on schools. LEC

SW 840 Social Program Design and Management (3). Introduction to client centered program design and evaluation, the nature of evaluation and program implementation. The course will help students understand the role of program evaluation and management, and develop the skills needed to evaluate programs and their impact. Prerequisite: Completion of all foundation requirements. LEC

SW 842 Using Outcomes for Administrative and Advocacy Practice (3). Emphasis is on the use of information to improve human service program performance. Includes content for the design, implementation, and evaluation of information systems. Prerequisite: Completion of all foundation requirements. LEC

SW 843 Strengthening Staff Performance in a Diverse Workplace (3). Builds knowledge and skills in effective supervision and human resource management with emphasis on maximizing client and community well-being by increasing job satisfaction, enhancing staff morale, and creating and maintaining workplaces that reflect, contribute to, and celebrate diversity in the larger community. 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 interpersonal strategies to implement change. Prerequisite: Completion of all foundation requirements. 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, and 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 Advocacy Practice (3). This course is designed to build on the content of the foundation course on community and organizational practice by further developing the theories, methods, and skills of community and advocacy practice. The course will help students know and further develop the analytical and empirical skills needed to effectively manage and advocate with and on behalf of different human service communities. Throughout the course, skill-based exercises are integrated 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 848 Fundamentals of Client-centered Management (3). Services to clients can often be most effectively provided by interventions at the organizational and community levels. Using client strengths and needs as the focus, students learn basic theories and skills necessary to provide such interventions. Topics covered include client-centered management, assessing outcomes, managing resources, program design and program analysis. Prerequisite: Completion of all foundation requirements. LEC

SW 849 Mastering the Use of Financial Records for Social Work Practices (3). Focus on the use of resources needed to operate a client centered program. Includes budgeting techniques and their application; use of budgets for decision making, and problems of reallocation. Prerequisite: Completion of all foundation requirements. LEC

KU social welfare graduates are eligible for membership in the National Association of Social Workers and for licensure to practice in Kansas and other states. The school stresses a practice-based curriculum that encourages students to integrate classroom learning with practicum doing.
SW 852 Social Work with Groups (3). Theory and practice of social work in the group setting are introduced. Focus is on the social worker's tasks and behaviors in clarifying group goals and in facilitating growth 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. Theories and practices are evaluated critically for their usefulness in a strengths approach to social work in mental health services. Prerequisite: Completion of all foundation requirements. LEC

SW 864 Supervision in Social Work (3). Course focuses on supervision as a practice in social work, with emphasis on the use of sharing power and authority, group and peer supervision, and mediation or joint advocacy between staff members and clients and staff and clients. Supervisory practice is examined from different role perspectives of the social administrator, educator, and clinical practitioner. Prerequisite: Completion of all foundation requirements. LEC

SW 866 Social Work Ethics (3). Immerses students in the ethical dimensions of social work practice. Includes examining moral and ethical decision making, and the development of skills necessary to make both clinical and administrative practice decisions. Prerequisite: Completion of all foundation requirements. LEC

SW 866 Social Work Practice with Children and Adolescents (3). Developmental norms and processes in childhood and adolescence and related implications for assessment and intervention methods in work with children and adolescents. Topics include countertransference issues in work with children, working with parents and children, intervention tools, stress in childhood, special issues, and concerns in adolescence, sexual abuse of children. Prerequisite: Completion of all foundation requirements. LEC

SW 889 Social Work with Clients with Alcohol and Drug-related Problems (3). Focus is on developing value consciousness and multidimensional understandings in relation to drug use and abuse. Patterns of drug use, sociocultural attitudes toward drug use and definitional issues in the drug field will be examined. Explanatory theories and contemporary interventions, including the applicability of generalist social work practice models are presented and critically assessed. Prerequisite: Completion of all foundation requirements. LEC

SW 890 Social Work Practice with Persons with AIDS (3). The purpose of this course is to educate social work practitioners about the impact of the growing AIDS epidemic in the United States. Facts about the incidence, transmission, and treatment of persons who test positive for HIV or have been diagnosed with AIDS will be provided. The focus will be on the implications for patients, families, and friends, as well as the social and ethical context of the disease. Prerequisite: Completion of all foundation requirements. LEC

SW 872 Cultural Diversity in Social Work Practice (3). Provides students with a framework of knowledge, values, and practice methodology for culturally competent social work practice. Emphasizes themes of oppression and empowerment, culture-specific strengths and resources, and multicultural/cultural perspectives. Prerequisite: Completion of all foundation requirements. LEC

SW 873 Social Work with Gay, Lesbian, Transgendered, and Bi-sexual Clients (3). Focuses on their impact on social work practice. Includes examining moral and ethical decision making, and the development of skills necessary to make both clinical and administrative practice decisions. Prerequisite: Completion of all foundation requirements. LEC

SW 874 Social Work Practice with Women (3). Expands knowledge and practice skills in working with women and girls. Critical examination of traditional and feminist practice approaches to problems that frequently confront women. Prerequisite: Completion of foundation requirements. LEC

SW 875 Readings and Investigations: (1-3). Opportunity for scholarly investigation in an area of special interest. Students pursue independent study in an area of social work practice through the guidance of a selected faculty member. RSH

SW 876 Social Work with 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 for 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 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 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 880 Current Issues in Professional Social Work Education: (0.50-3). Course provides opportunity for innovative course content designed for the social work professional. Subjects offered include: Psychology; A Biopsychosocial Approach, Ethics and the Social Worker, Meditation, 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 History and Philosophy I (3). Provides an educational structure in which various aspects of the problem of interest can be intensively explored. Students survey current state of the art in area of interest, 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 formation, choices among research strategies, and statistical techniques. Develops 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 history of 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 new practices in terms of program development and evaluation. LEC

SW 985 History and Philosophy II (3). Provides an educational structure for the refinement of dissertation proposals through class presentation and critique. Specific techniques and alternatives in studying a variety of dissertation questions are considered. LEC

SW 986 Research Practicum (3). Provides a field research experience designed to explore a specific area of research interest using quantitative and/or qualitative methods. LEC

SW 990 Graduate Research (1-9). Individual research preparatory to defense of dissertation prospectus. By arrangement with doctoral chair.) RSH

SW 998 Doctoral Applied Research and Education Studies (1). This course provides the opportunity for doctoral students to learn about research or teaching through direct application of research or teaching skills under the mentorship of faculty. RSH

SW 999 Dissertation (1-12). TDE
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 May 2007.

Lauren S. Aaronson. Professor, Ph.D., Washington, Nursing.

Elizabeth Abrahamson. Research Assistant Professor, Ph.D., M.P.H., Wichita State. Preventive Medicine.

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.

Syed Omar Ahmad. Assistant Professor, Ph.D., Texas (El Paso). Occupational Therapy.

Omofolabo Ajayi-Soyinka. Associate Professor, Ph.D., Nigeria. Theatre & Film.

Cynthia Akagi. Assistant Professor, Ph.D., Kansas State. Health, Sport, & Exercise Sciences.

David Albertini. Professor, Ph.D., Harvard. Molecular & Integrative Physiology.

Sandra L. Albrecht. Associate Professor, Ph.D., Texas. Sociology.

Jane Aldrich. Professor, Ph.D., Michigan. Medicinal Chemistry.

David E. Alexander. Assistant Professor, Ph.D., Indiana. Ecology & Evolutionary Biology, Molecular Biosciences.


Raquel Alexander. Assistant Professor, Ph.D., Texas. Business.


Giselle Anatol. Associate Professor, Ph.D., Pennsylvania. English.

Christopher Anderson. Associate Professor, Ph.D., Pittsburgh. Business.

Crystal Anderson. Assistant Professor, Ph.D., William & Mary. American Studies.

Danny J. Anderson. Professor, Associate Dean, College of Liberal Arts & Sciences, Ph.D., Kansas. Spanish & Portuguese.


Robert J. Antonio. Chancellors Club Teaching Professor, Ph.D., Notre Dame. Sociology.

Julie Archer. Assistant Professor, Ph.D., Denver. Social Welfare.

Wilfred N. Arnold. Professor, Ph.D., Cornell. Biochemistry & Molecular Biology.


Ronald A. Ash. Professor, Ph.D., South Florida. Business.

Elizabeth Asledu. Associate Professor, Ph.D., Illinois. Economics.


Paul Atchley. Associate Professor, Ph.D., California (Riverside). Psychology.

Ruth Atchley. Associate Professor, Ph.D., California (Riverside). Psychology.

G. Douglas Atkins. Professor, Ph.D., Virginia. English.

Barbara Atkinson. Professor, Executive Director, School of Medicine; Vice Chancellor, Clinical Affairs, KUMC Medical Center; 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; Dean, School of Pharmacy; Ph.D., Kansas. Pharmaceutical Chemistry.

Edward Auer. Assistant Professor, Ph.D., State Univ. of New York (Buffalo). Speech-Language-Hearing: Sciences & Disorders.


Yoshiaki Azuma. Assistant Professor, Ph.D., Kyushu. Molecular Biosciences.

Yong Bai. Assistant Professor, Ph.D., Duke. Ecology & Evolutionary Biology.

Associate Professor, Ph.D., Illinois (Urbana). Business.

Vincent Barker III. Associate Professor, Ph.D., Illinois (Urbana). Business.

Harold W Barkman Jr. Associate Professor, M.D., Creighton. Pharmacology, Toxicology, & Therapeutics.

Steven Barlow. Professor, Ph.D., Wisconsin. Speech-Language-Hearing: Sciences & Disorders.

Philip H. Barnard. Associate Professor, Ph.D., State Univ of New York (Buffalo). English.


Barbara Barnett. Assistant Professor, Ph.D., North Carolina. Journalism & Mass Communications.


Frank Baron. Professor, Ph.D., California (Berkeley). Germanic Languages & Literatures.

Ronald Barnett-Gonzalez. Associate Professor, Ph.D., Kansas. Aerospace Engineering.

Philippe Barrière. Associate Professor, Ph.D., Sorbonne. Architecture.

Arlene Barry. Associate Professor, Ph.D., Wisconsin. Curriculum & Teaching.

Mehmet Barry. Associate Professor, Ph.D., Minnesota. Chemistry.

Michael Basket. Associate Professor, Ph.D., California (Los Angeles). Theatre & Film.


C. Daniel Batson. Professor, Ph.D., Princeton. Psychology.


Margaret Boyer. Professor, Ph.D., Cornell. Mathematics.

Robin Boyles. Associate Professor, Ph.D., Indiana. Spanish & Portuguese.

Nancy Baym. Associate Professor, Ph.D., Illinois (Urbana). Communication Studies.

Barry Baysinger. Professor, Ph.D., Virginia Polytechnic Inst. & State Univ. Business.


Thomas D. Belsecker. Associate Professor, Ph.D., Wisconsin. Communication Studies.

Stuart Bell. Professor, Dean, School of Engineering; Ph.D., Texas A&M Univ. Mechanical Engineering.

Stephen Benedict. Associate Professor, Ph.D., Vanderbilt. Molecular Biosciences.

Timothy A. Bengtson. Clyde & Betty Reed Teaching Professor, Ph.D., Northwestern. Journalism.


Caroline Bennett. Assistant Professor, Ph.D., Cincinnati. Civil, Environmental, & Architectural Engineering.

Leslie Bennett. Assistant Professor, M.F.A., Boston Univ. School for the Arts. Theatre & Film.

David Benson. Associate Professor, Ph.D., California (Los Angeles). Chemistry.

Chuck Berg. Professor, Ph.D., Iowa. Theatre & Film.


Sandra Bergquist. Associate Professor, Ph.D., Iowa. Nursing.

Cory Berkland. Assistant Professor, Ph.D., Illinois (Urbana). Chemical & Petroleum Engineering.

Nancy E.J. Berman. Professor, Ph.D., Massachusetts Inst. of Technology. Anatomy & Cell Biology.

Daniel Bernstein. Professor, Ph.D., California (San Diego). Psychology.

Chane Berte. Associate Professor, Ph.D., California (Berkeley). Chemistry.

Marianne Berry. Professor, Ph.D., California. Social Welfare.

David Bessong. Professor, Ph.D., Rutgers. Physics & Astronomy.


Peter L. Bevans. Associate Professor, M.S., Missouri. Dietetics & Nutrition.

Gautam Bhattacharya. Associate Professor, Ph.D., Rochester. Economics.


Henry Bial. Assistant Professor, Ph.D., New York. Theatre & Film.

Monica Biereat. Professor, Ph.D., Michigan. Psychology.

Bridget Biggs. Assistant Professor, Ph.D., Kansas. Applied Behavioral Science.

Mehmet Bilgen. Adjunct Associate Professor, Ph.D., Iowa State. Physics & Astronomy.


Melissa Birch. Associate Professor, Ph.D., Illinois. Business.

Shawn Bitters. Assistant Professor, M.F.A., Rhode Island School of Design. Art.

George Bittlingmayer. Wagnon Distinguished Professor, Ph.D., Chicago. Business.

Ross Black. Associate Professor, Ph.D., Wyoming. Geology.

Brian Blaauw. Associate Professor, Ph.D., U.S. Medical Chemistry.

V. Gustavo Blanco. Associate Professor, Ph.D., Instituto M&M Ferreyra. Molecular & Integrative Physiology.

The National Survey of Student Engagement Institute at Indiana University selected KU as one of 20 U.S. universities with effective educational practices that merited further study. The final NSSE report said, “Many faculty members impressed us with the genuine care and concern they had for students.” For more information, see http://nsse.iub.edu.
Michael Bleich. Professor; Associate Dean, Clinical & Community Affairs, School of Nursing; Chair, Dept. of Health Policy & Management; Ph.D., Nebraska (Lincoln). Nursing.

Shannon Blunt. Assistant Professor, Ph.D., Missouri. Electrical Engineering & Computer Science.


John T. Booker. Associate Professor, Ph.D., Minnesota. French & Italian.

Wanda Bonnel. Associate Professor, RN, Ph.D., Kansas. Nursing.

Audra Boone. Associate Professor, Ph.D., Pennsylvania State. Business.


Marjon整齐. Assistant Professor; Associate Dean, Research, School of Nursing; Ph.D., Kansas. Nursing.

Ruth Bowman. Assistant Professor, M.F.A., Kansas. Design.

Kristin Bowman-James. Professor, Ph.D., Temple. Chemistry.


Diane Boyle. Associate Professor, Ph.D., Kansas. Nursing.

David A. Braten. Professor, Ph.D., California (Davis). Physics & Astronomy.

Barbara Bradley. Assistant Professor, Ph.D., Georgia. Curriculum & Teaching.

David Brackett. Assistant Professor, M.F.A., Kansas. Design.

Barbara Bradley. Assistant Professor, Ph.D., Georgia. Curriculum & Teaching.


Nyla R. Bramscombe. Professor, Ph.D., Purdue. Psychology.

Gary Bredlow. Assistant Professor, Ph.D., Kansas City (Missouri). Nursing.

M. Kathleen Brewer. Associate Professor, Ph.D., Georgia State. Nursing.

John J. Bricker. Professor, Ph.D., Edinburgh. Philosophy.

Ann M. Brill. Associate Professor, Dean, School of Journalism & Mass Communications; Ph.D., Minnesota. Journalism.

Hannah Britton. Associate Professor, Ph.D., Syracuse. Political Science.

John Broholm. Associate Professor, M.A., Missouri. Journalism.

Kari Brooks. Assistant Professor, Ph.D., Kansas. Nursing.


Frank M. Brown. Associate Professor, Ph.D., Edinburgh. Electrical Engineering & Computer Science.

James Brown. Assistant Professor, Ph.D., North Carolina. Germanic Languages & Literatures.


J. Christopher Brown. Associate Professor, Ph.D., California (Los Angeles). Geography.

Mary Hise Brown. Assistant Professor, Ph.D., Texas Tech. Dietetics & Nutrition.


Robert D. Brown. Professor, Ph.D., California (Berkeley). Mathematics.


Nathaniel Brunsell. Assistant Professor, Ph.D., Utah State. Geography.

Juan Bruese. Associate Professor, Ph.D., Buenos Aires. Anatomy & Cell Biology.

Shilpa Buch. Associate Professor, Ph.D., Univ. Baroda, India. Molecular Integrative Physiology.

Matthew Buechner. Associate Professor, Ph.D., Wisconsin. Molecular Biosciences.

Ruben D. Bunag. Professor, M.D., Univ. of the Philippines. Pharmacology. Toxicology, & Therapeutics.

Matthew Burke. Assistant Professor, M.F.A., Queens College, City Univ. of New York. Art.

Louis C. Burmeister. Professor, Ph.D., Purdue. Mechanical Engineering.

Daryle H. Busch. Roy A. Roberts Distinguished Professor, Ph.D., Illinois. Chemistry.


Michael D. Butler. Associate Professor, Ph.D., Illinois. English.

Ralph Byers. Professor, Ph.D., Cornell. Mathematics.


Byron Caminero-Santangelo. Associate Professor, Ph.D., California (Irvine). English.

Marta Caminero-Santangelo. Associate Professor, Ph.D., California (Irvine). English.

Edward Canada. Professor, Director, Doctoral Studies, School of Social Welfare; Ph.D., Ohio State. Social Welfare.

Diana Carlin. Professor, Ph.D., Nebraska. Communication Studies.

Gerald Carlson. Professor; Chair, Dept. of Biochemistry & Molecular Biology; Ph.D., Iowa State. Biochemistry & Molecular Biology.

María Carlson. Professor, Ph.D., Indiana. Slavic Languages & Literatures.

Robert G. Carlson. Professor, Ph.D., Massachusetts Inst. of Technology. Chemistry.


James B. Carothers. Professor, Ph.D., Virginia. English.

W. David Carstens. Assistant Professor, Ph.D., Southern Mississippi. Health, Sport, & Exercise Sciences.

William Carswell. Associate Professor, D.Arch., Queen's Univ. of Belfast. Architecture.

Judith A. Carta. Professor, Ph.D., Kansas. Special Education.


Paulyn Cartwright. Assistant Professor, Ph.D., Yale. Ecology & Evolutionary Biology.

Peter J. Casagrande. Professor, Ph.D., Indiana. English.


David Cateforis. Associate Professor, Ph.D., Stanford. History of Art.

Hugh W. Catts. Professor; Chair, Dept. of Speech-Language-Hearing: Sciences & Disorders; Ph.D. Florida. Speech-Language-Hearing: Sciences & Disorders.

Jerry D. Chaffin. Professor, Ed.D., Kansas. Special Education.

Swapan Chakrabarti. Associate Professor, Ph.D., Nebraska. Electrical Engineering & Computer Science.

Rosemary Chapin. Professor, Ph.D., Minnesota. Social Welfare.

John Charnes. Professor, Ph.D., Minnesota. Business.


Keith W. Chauvin. Associate Professor; Associate Dean, Academic Affairs, School of Business; Ph.D., Illinois (Urbana). Business.

Andrew Chen. Assistant Professor, Ph.D., Connecticut. Business.


Paul D. Cheney. Professor; Chair, Dept. of Molecular & Integrative Physiology; Co-director, Neurosciences Program; Ph.D., State Univ. of New York (Upstate Medical Center). Molecular & Integrative Physiology.

So-Min Cheong. Associate Professor, Ph.D., Washington. Geography.

Michael D. Cherniss. Professor, Ph.D., California (Berkeley). English.

Mark Chertoff. Associate Professor, Ph.D., Wisconsin. Hearing & Speech.

Tailand Chi. Associate Professor, Ph.D., Washington. Business.

Jay Childers. Assistant Professor, Ph.D., Texas. Communication Studies.

Margaret Chilicki. Associate Professor, Ph.D., Pennsylvania. East Asian Languages & Cultures.

Won Sup Choi. Associate Professor, Ph.D., M.F.H., California (San Diego). Preventive Medicine & Public Health.

Kelly H. Chong. Assistant Professor, Ph.D., Univ. of Chicago. Sociology.

Oswald Chong. Assistant Professor, Ph.D., Texas. Civil, Environmental, & Architectural Engineering.

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In its final report, the National Survey of Student Engagement Institute at Indiana University said, "We made a good choice by including KU in the DEEP project ("Documenting Effective Educational Practice"). Many other colleges and universities will benefit from learning about KU's policies and practices."

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