Graduate Catalog

2010-2011

Graduate School
Wichita State University
1845 Fairmount
Wichita, Kansas 67260-0004
(316) 978-3095
wichita.edu/gradschool
Fall Semester 2010
April –August .................. Fall semester registration
August 19 .................. Classes begin
September 6 .................. Labor Day holiday
September 16 .................. Final date for filing Application for Degree form in Graduate School office
October 12 .................. Midterm point
October 14–15 .................. Fall recess
November 1 .................. Final date for withdrawal with nonpenalty grades
November 24–28 .................. Thanksgiving recess
December 3 .................. Deadline for oral defense to be held*
December 9 .................. Last day of classes
December 10 .................. Final date for all degree requirements, excluding current courses, to be met and reported to the Graduate School, including: oral defense results, comprehensive exam, incomplete grades, digital thesis.* All departmental requirements must have been met*
December 10 .................. Study day
December 11–17 .................. Final examinations
TBA .................. University commencement

Spring Semester 2011
November–January .................. Spring semester registration
January 17 .................. Martin Luther King, Jr. Day, holiday
January 18 .................. Classes begin
February 14 .................. Final date for filing Application for Degree form in Graduate School office
March 10 .................. Midterm point
March 21–27 .................. Spring recess
April 4 .................. Final date for withdrawal with nonpenalty grades
May 2 .................. Deadline for oral defense to be held*
May 9 .................. Final date for all degree requirements, excluding current courses, to be met and reported to the Graduate School, including: oral defense results, comprehensive exam, incomplete grades, digital thesis.* All departmental requirements must have been met*
May 9 .................. Last day of classes
May 10 .................. Study day
May 11–17 .................. Final examinations
TBA .................. Commencement

Summer Session 2011
April –June .................. Summer session registration
May 30 .................. Memorial Day holiday
May 23–June 3 .................. Presession
June 6 .................. Classes begin, eight-week term and first four-week term
June 17 .................. Final date for filing Application for Degree card in Graduate School Office
July 4 .................. Independence Day, holiday
July 5 .................. Classes begin, second four-week term
July 15 .................. Deadline for oral defense to be held*
July 22 .................. Final date for all degree requirements, excluding current courses, to be met and reported to the Graduate School, including: oral defense results, comprehensive exam, incomplete grades, digital thesis.* All departmental requirements must have been met*
July 29 .................. Summer session ends

* Graduate School deadlines to ensure graduation that semester.
These dates are subject to change.
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*inside back cover*
## Graduate Degree Programs • Departmental Admission Requirements

Minimum grade point average (GPA) for all master's programs is 2.750 on last 60 hours of coursework or nearest two full years of coursework unless otherwise stated.

### Programs

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<tr>
<td>Accounting (MCC)</td>
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<td>Overall GPA of 3.2; grade of B (3.000) or better in all accounting courses; GMAT score (must be in 25th percentile or higher in each section, and overall); GMAT must have been taken within the last six years</td>
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<tr>
<td>Aerospace Engineering</td>
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<tr>
<td>Master of Science (MS)</td>
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<tr>
<td>GPA 3.000 last 60 hours; undergraduate degree in engineering or related field</td>
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<tr>
<td>Doctor of Philosophy (PhD)</td>
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<tr>
<td>GPA 3.250 in all graduate hours; GRE (general); master's degree in engineering or physical science</td>
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<tr>
<td>Anthropology (MA)</td>
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<tr>
<td>GPA 3.250 last 60 hours; 15 hours of anthropology; statement of purpose with intended specialization; application deadline: February 1 for fall, October 1 for spring</td>
</tr>
<tr>
<td>Art, Studio (MFA)</td>
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<tr>
<td>BFA degree or equivalent; GPA 3.000 in art courses, resume, portfolio (15 color slides); three references; statement of philosophy; Options: ceramics, printing/drawing, printmaking and sculpture. Deadlines: first Wednesday in February for fall admission; first Wednesday in October for spring admission</td>
</tr>
<tr>
<td>Audiology (AuD)</td>
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<tr>
<td>GPA 2.750 overall; 3.000 last 60 hours and major; GRE; three recommendation letters, one page personal essay; acceptance fee of $50. Applicants are encouraged to file separate application through CSDCAS. Fall admission only; Deadline February 1</td>
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<tr>
<td>Biological Sciences (MS)</td>
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<tr>
<td>GRE (general and biology); GPA 3.000 in all UG biology courses; 24 credit hours in biology; 15 credit hours in chemistry; three reference letters from science faculty</td>
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<tr>
<td>Business Administration (MBA)</td>
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<td>GMAT scores, personal goals statement; two reference forms; current resume. Application deadline – July 1 for fall; December 1 for spring</td>
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<tr>
<td>Executive Business Administration</td>
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<td>Personal essay; letters of recommendation; interview</td>
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<td>Chemistry</td>
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<tr>
<td>Master of Science (MS)</td>
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<tr>
<td>BS Chemistry (ACS approved or equivalent); GPA 3.000 (overall and in all chemistry courses); general GRE (subject recommended); two recommendation letters; statement of goals and research interests</td>
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<tr>
<td>Doctor of Philosophy (PhD)</td>
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<tr>
<td>BS Chemistry (ACS approved or equivalent); GPA 3.000 (overall and in all chemistry courses); general GRE (subject recommended); two recommendation letters; statement of goals and research interests</td>
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<tr>
<td>Communication (MA)</td>
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<tr>
<td>GPA 3.000 over last 60 hours, GRE (general); statement of purpose</td>
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<td>Communication Sciences and Disorders</td>
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<tr>
<td>Master of Art (MA)</td>
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<tr>
<td>GPA 2.750 overall; 3.000 last 60 hours and major; GRE; three recommendation letters, one page personal essay; acceptance fee of $50. Applicants are encouraged to file separate application through CSDCAS. Fall admission only; deadline February 1</td>
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<tr>
<td>Doctor of Philosophy (PhD)</td>
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<tr>
<td>GRE score of at least 1000 on Verbal and Quantitative combined, and 3.5 on Writing. GPA at least 3.500 in last 60 hours of coursework; professional resume; three recommendation letters; acceptance fee of $100</td>
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<td>Computer Networking (MS)</td>
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<td>BS in engineering or area related to information technology; GPA 3.000 in last 60 hours</td>
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<td>Computer Science (MS)</td>
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<td>GPA 3.000 in last 60 hours; equivalent of UG degree in computer science, computer engineering, or related field; GRE recommended but not required</td>
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<td>Counseling (MEd)</td>
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<td>GPA 3.000 last 60 hours; statement of professional goals; names, addresses and telephone numbers of three references; resume; 9 undergraduate hours in psychology and 6 additional hours in behavioral sciences</td>
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<td>GPA 3.000 in English courses; 24 hours of relevant courses. Fiction option will require 20 pages of original writing; Poetry option will require six original poems. Deadlines—Oct. 1 for spring; Feb. 10 for fall admission.</td>
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<tr>
<td>Criminal Justice (MA)</td>
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<td>GPA 3.000 last 60 hours; autobiographical statement of interests and goals; three recommendation letters</td>
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<td>Curriculum and Instruction (MEd)</td>
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<td>Graduate of the WSU teacher education program with at least a 2.750 in last 60 hours, or a graduate from an NCATE accredited program with at least a 3.000 GPA in the last 60 hours, or score at least 917 on any two of the GRE subtests, or acceptable score on the MAT, or provide evidence of academic aptitude; and evidence of curriculum development or teaching</td>
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<td>Economics (MA)</td>
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<td>Educational Leadership</td>
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<td>Master of Education (MEd)</td>
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<tr>
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<td>Doctor of Education (EdD)</td>
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<tr>
<td>GPA 3.500 all graduate hours; specific coursework requirements (see departmental information for specifics); three years formal experience in P-16 educational organization; three recommendations; resume; goals statement; sample of academic writing. Review of completed applications will begin in the fall semester. Summer admission only</td>
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<td>Engineering Management (MEIM)</td>
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<td>GPA 3.000 last 60 hours and in all graduate work; UG major in engineering or related field; two years acceptable professional work experience, experience with database software, GRE may be required</td>
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<td>English (MA)</td>
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<td>GPA 3.000 in English courses; 24 hours of relevant English courses. Five hundred word statement of purpose (see departmental information for details on statement of purpose requirements). Deadlines—Oct. 1 for spring; Feb. 10 for fall admission</td>
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Applicants whose native language is not English may also be required to demonstrate English proficiency, in the form of official scores on the TOEFL or IELTS. Please refer to the international admissions section of the catalog for details about the English proficiency requirement. See page 13.

URLs for entrance exam information and applications for graduate degree programs:

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<td>MAT</td>
<td><a href="http://www.milleranalogies.com">www.milleranalogies.com</a></td>
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Minimum grade point average (GPA) for all master's programs is 2.750 on last 60 hours of coursework or nearest two full years of coursework unless otherwise stated.
## Graduate Certificate Programs

Please see the program sections of the Graduate Catalog for specific details about each certificate program offered.

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<tr>
<td>Business</td>
<td>Enterprise Systems and Supply Chain Management</td>
<td>A 12-hour program that equips students with the skills and abilities to design and manage enterprise-wide supply chains. Offered jointly with the department of decision sciences in the Barton School of Business. See page 42, 82</td>
</tr>
<tr>
<td>Communication</td>
<td>Applied Communication</td>
<td>Provides concentrated study in a core of 14 hours of related, upper-level skills courses in applied communication. Covers established practices of professional communication and practical ways communication theory can be applied in work-related situations. See page 133</td>
</tr>
<tr>
<td>Education</td>
<td>Child/Play Therapy</td>
<td>A 15-hour post-master's certificate program designed to meet training standards for play therapists established by the Association for Play Therapy. See page 57</td>
</tr>
<tr>
<td></td>
<td>Educational Technology</td>
<td>A program of 15 hours for competency in technology for educators seeking positions involving computers in education or who are interested in adding this area of expertise to their credentials. See page 60</td>
</tr>
<tr>
<td></td>
<td>Literacy</td>
<td>A 15-hour program designed to allow educators to advance their knowledge and skills of teaching literacy in the classroom, and to integrate literacy into all content areas. Provides advanced study for teachers and educators seeking lead positions in buildings where literacy is a focus for federal legislation and state accreditation. See page 60</td>
</tr>
<tr>
<td></td>
<td>National Board for Professional Teaching Standards</td>
<td>A 15-hour program designed to provide instruction for classroom teachers seeking NBPTS certification. See page 60</td>
</tr>
<tr>
<td>Human Performance Studies</td>
<td>Coaching</td>
<td>A 15-hour program of study in exercise physiology, risk management and sport safety, motor development and skill acquisition, sport psychology, and organization and administration. See page 69</td>
</tr>
<tr>
<td></td>
<td>Functional Aging</td>
<td>A 12-hour program of study of the nature and scope of the physiological aspects of aging and issues related to designing the environment for older adults. See page 69</td>
</tr>
<tr>
<td>Industrial Engineering</td>
<td>Advanced Manufacturing Analysis</td>
<td>A 12-hour program aimed at equipping students with the skills to carry out advanced analysis of manufacturing processes such as metal forming, machining, casting, and welding. See page 81</td>
</tr>
<tr>
<td></td>
<td>Composite Materials &amp; their Processing</td>
<td>A 12-hour program aimed at increasing knowledge of the properties of composite materials and manufacturing processes of these materials. See page 81</td>
</tr>
<tr>
<td></td>
<td>Design for Manufacturing</td>
<td>A 12-hour program of sequenced and complementary courses for practitioners in industry who are responsible for product design, development, and manufacturing. See page 82</td>
</tr>
<tr>
<td></td>
<td>Enterprise Systems and Supply Chain Management</td>
<td>A 12-hour program that equips students with the skills and abilities to design and manage enterprise-wide supply chains. Offered jointly with the department of decision sciences in the Barton School of Business. See page 42, 82</td>
</tr>
<tr>
<td></td>
<td>Foundations of Six Sigma and Quality Improvement</td>
<td>A 12-hour program primarily for graduate students with industrial affiliation who are interested in enhancing their skills in quality management and Six Sigma methodology. See page 82</td>
</tr>
<tr>
<td></td>
<td>Industrial Ergonomics &amp; Safety</td>
<td>A 12-hour program of advanced knowledge and methodology of ergonomics and safety engineering for practitioners in industry who are responsible for the design and evaluation of work systems (tasks, materials, tools, equipment, workstations, and environments) for better usability, health, safety, and performance of workers in the workplace. See page 82</td>
</tr>
<tr>
<td></td>
<td>Lean Systems</td>
<td>A 12-hour program of advanced knowledge and methodology of lean systems design, evaluation, and operation for practitioners in industry who are responsible for the development and management of production systems in the workplace. See page 82</td>
</tr>
<tr>
<td></td>
<td>System Engineering &amp; Management</td>
<td>A 12-hour program of knowledge and methodology so students can learn to apply systems concepts and techniques to the understanding, description, design, and management of large-scale systems requiring the integration of information and human activity. See page 82</td>
</tr>
<tr>
<td>Interdisciplinary</td>
<td>Great Plains Studies</td>
<td>Interdisciplinary program of 20 hours emphasizing Great Plains study. Provides a context for careers in education, law, museum, community agencies, and other fields where knowledge of the region is useful. See page 149</td>
</tr>
<tr>
<td></td>
<td>Advanced Composite Materials</td>
<td>A 12-hour program aimed at equipping students with the knowledge of advanced composites including materials and processes, manufacturing, and structural analysis and design. See page 73</td>
</tr>
<tr>
<td>Management</td>
<td>Entrepreneurship and Innovation</td>
<td>A 12-hour program aimed at providing students the knowledge base in entrepreneurship to undertake moving technological expertise or high potential business ideas through the start-up of high growth businesses. Provides extensive conceptual and applied know-how and expertise to students interested in entrepreneurship. See page 43</td>
</tr>
<tr>
<td>Nursing</td>
<td>Acute Care Nurse Practitioner</td>
<td>Includes 12–20 hours of the existing Master of Science in nursing curriculum depending on the specialty as an opportunity to gain additional graduate education in another nursing specialty option. See page 115</td>
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</tbody>
</table>
Please see the program sections of the Graduate Catalog for specific details about each certificate program offered.

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<tr>
<th>Programs</th>
<th>Certificates</th>
<th>Certificate descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Health</td>
<td>Public Health</td>
<td>A 15-hour program of core public health training in basic public health competencies, including biostatistics, epidemiology, environmental health sciences, health services administration and policy, and social and behavioral sciences. See page 111</td>
</tr>
<tr>
<td>Public Administration</td>
<td>City &amp; County Management</td>
<td>A 12-hour program offering advanced study in the management of city and county government. See page 168</td>
</tr>
<tr>
<td></td>
<td>Economic Development</td>
<td>A 12-hour program offering advanced study in economic development by state and local governments. See page 168</td>
</tr>
<tr>
<td></td>
<td>Nonprofit Management</td>
<td>A 12-hour program offering advanced study in non-profit management. See page 168</td>
</tr>
<tr>
<td></td>
<td>Public Finance</td>
<td>A 12-hour program offering advanced study in public finance. The program enhances student’s career opportunities and provides public finance practitioners an avenue to improve their skills. See page 168</td>
</tr>
</tbody>
</table>
Graduate School

Offices: 107 Jardine Hall
J. David McDonald, dean
Abu S.M. Masud, associate dean
Mara Alagic, assistant dean
Denise Canoles, assistant to the dean

The Graduate School at Wichita State University (WSU) supervises graduate study at the university, establishes standards for admission to graduate work, and recommends students who have completed requirements for graduation.

The Graduate School provides opportunities to pursue advanced study in 42 master's programs, one educational specialist program, and 12 doctoral programs, two of which are first professional degrees. Approximately 3,100 students—roughly one of every five WSU students—are graduate students. The university, classified by the Carnegie Foundation as a doctoral granting research university (high research activity), annually grants approximately 60 doctoral degrees and more than 750 master's degrees. The Graduate School, an affiliate member of the National Association of Graduate and Professional Students, is a member of the Council of Graduate Schools and the Midwestern Association of Graduate Schools.

Academic programs include master's, specialist, doctoral, and graduate certificate programs. Doctoral degrees are awarded in applied mathematics; chemistry; communication sciences and disorders; educational leadership; nursing practice; psychology; and in aerospace, electrical, industrial, and mechanical engineering. Two first professional degrees are also awarded: Doctor of Audiology and Doctor of Physical Therapy.

The primary goals of the Graduate School are to encourage independent scholarship and to develop competence in research or other creative activity. Students are expected to master special fields as well as to develop appropriate methods of inquiry for future professional growth.

The Graduate School operates according to bylaws approved by the graduate faculty. Current bylaws are available online at wichita.edu/gradschool.

Graduate Study Defined

The graduate experience involves specialized knowledge and concentrated study in one area. In this respect it differs from undergraduate study, which introduces students to a wide range of subjects and develops general intellectual skills.

A graduate program is generally more focused on a specific area of interest and on accruing specialized skills to practice a profession or do advanced research. There are two types of graduate degrees, professional degrees and research degrees.

At the master's level, a professional degree provides a specific set of skills needed to practice a particular profession. It is generally a final degree. The research master's provides experience in research and scholarship, and it may be a final degree or a step toward a doctoral degree.

Terminal projects associated with the completion of the master's degree provide evidence of understanding of the discipline-specific inquiry methods, thinking critically about a problem, and producing a written document or creative work appropriate to standards of the discipline.

Wichita State University's master's degrees include a minimum of 30 graduate hours and usually take one or two years of full-time study to complete. Students have six years to complete their degree. The professional master's degrees often involve some type of internship or fieldwork. The research degree may involve writing a thesis or completing comprehensive exams.

The thesis is considered a scholarly contribution to knowledge evidencing research or creative capacity, independent thought, and the ability to interpret materials. In some cases it involves original research or development of original works such as a painting or a manuscript in creative writing.

The doctoral degree typically involves both coursework and a major research project. Students admitted to a doctoral program usually spend four to six years of full-time study completing their degree. Depending upon the field of study, the first two to three years involve classes, seminars, directed readings, and directed research to provide a comprehensive knowledge of an academic field. During this time, students may also begin independent research projects.

Comprehensive knowledge in the field is assessed through the qualifying exam. On passing the qualifying exam, students become a candidate for the degree and must be continuously enrolled every semester for a minimum of two credit hours of dissertation research.

As a candidate for a doctoral degree, a student works on a project that involves original research and reports on the research through the production of a dissertation. The dissertation is considered a substantial contribution to knowledge in which the student exhibits original scholarship and the ability to conduct independent research or creative works. Depending upon the field, the dissertation project may take one to two years to complete.

Students pursuing graduate certificates are scholars, who for academic, personal, or professional reasons, desire graduate-level education without commitment to a graduate degree program, or who desire interdisciplinary coursework to complement a graduate degree program.

Graduate certificates are awarded by departments, colleges, and the Graduate School to recognize graduate-level accomplishment in a cluster of related graduate courses on a topic, skill, theme, or method, as defined by the appropriate faculty. The courses serve as the student's record of coherent academic accomplishment. Graduate certificate programs are not degrees, concentrations, minors, or certification programs.

Graduate Council

The Graduate Council consists of the dean of the Graduate School, ten members of the graduate faculty elected by the graduate faculty, one member appointed by the graduate dean, and one graduate student. The council determines and recommends general policies for the Graduate School. In addition to being the elected representative of the graduate faculty, the Graduate Council serves as the Committee on Exceptions with direct administrative action taken by the graduate dean. This responsibility may be discharged by the council acting as a committee of the whole, through subcommittees, or ad hoc committees consisting of selected members of the graduate faculty and graduate student body.

Conclusions reached by the Graduate Council are transmitted as recommendations to the dean of the Graduate School.

The Graduate Council also serves as a committee on appeals if the student is dissatisfied with direct administrative action taken by the graduate dean. In such cases, the judgment of the council is final.

Doctoral Sub-Council

The Doctoral Program Sub-Council exists for the general advocacy of doctoral programs throughout the university community and to review, determine, and recommend policies for doctoral programs. Membership consists of the graduate dean, one representative from each doctoral program, and one member elected from the Graduate Council.

Graduate Faculty

The graduate faculty consists of the university president, the provost and vice president for academic affairs and research, the deans of the
Graduate School and academic colleges, and regular faculty members nominated and approved for graduate faculty status.

Members of the graduate faculty at Wichita State University, by virtue of their qualifications, contribute to graduate education by teaching and advising graduate students; by guiding master's theses and doctoral dissertations; by participating in examinations and evaluations; by engaging in a program of research, scholarship, or creative activity; and by serving in the administration of their programs and in the governance of the Graduate School. All regular graduate faculty members hold the terminal degree in their discipline.

At Wichita State, regular faculty are not automatically members of the graduate faculty. Department faculty request membership on the graduate faculty by submitting an application with a current academic resume. Applications are reviewed and acted upon by the departmental committee, academic dean, and the graduate dean. Regular faculty are normally appointed either as full members or as associate members, while adjunct faculty are appointed in the acting ad hoc graduate faculty affiliate or practicing professional categories.

**Full Membership with Doctoral Dissertation Chairing** reflects the highest level of scholarly attainment and is awarded for substantial and sustained scholarly or creative achievement over the last five to seven years. This category also requires experience in serving on or supervising thesis or dissertation committees at WSU or elsewhere. Responsibilities include those listed under the full membership category plus the chairing of doctoral dissertations.

**Full Membership** is defined as tenure-eligible faculty ranking above instructor, with substantial interest in graduate education, and for whom a demonstrable departmental or program need exists. Faculty nominated for membership in this category shall be expected to hold the terminal degree or its equivalent in training and/or experience (documentation required when equivalency is claimed) and be judged qualified to bear all designated academic responsibilities of the graduate program(s) in which they serve. It is expected that significant scholarly and/or artistic or creative achievement over the last five to seven years will be evident in the academic and professional resume presented in support of nominations and renewals for full membership. Responsibilities include thesis chairing, graduate teaching, serving as members of thesis and dissertation committees and graduate student mentoring and advising.

**Associate Membership** is defined as tenure-eligible faculty ranking above instructor, with substantial interest in graduate education, and for whom a demonstrable departmental or program need exists. Faculty nominated for membership in this category shall be expected to hold the terminal degree or its equivalent in training and/or experience (documentation required when equivalency is claimed) and be judged qualified to bear all designated academic responsibilities of the graduate program(s) in which they serve. It is expected that significant scholarly and/or artistic or creative achievement over the last five to seven years will be evident in the academic and professional resume presented in support of nominations and renewals for full membership. Responsibilities include thesis chairing, graduate teaching, serving as members of thesis and dissertation committees and graduate student mentoring and advising.

**Graduate Faculty Affiliate Membership** is available to adjunct faculty or faculty (not eligible for tenure) employed full time by the university or tenured tenure-track faculty (or equivalent) in another accredited university (US or abroad) or a professional with nationally recognized research/scholarly/creative achievement (documentation required). Faculty in this category will have substantial interest in graduate education, and for whom a demonstrable departmental or program need exists. Faculty nominated for membership in this category shall be expected to hold the terminal degree or its equivalent in training and/or experience (documentation required when equivalency is claimed) and be judged qualified to bear all designated academic responsibilities of the graduate program(s) in which they serve. It is expected that significant scholarly and/or artistic or creative achievement over the last five to seven years will be evident in the academic and professional resume presented in support of nominations and renewals for affiliate membership. Responsibilities include graduate teaching, serving as members of thesis and dissertation committees and graduate student mentoring. Affiliates may chair specific thesis committees when authorized by the Graduate School, and may co-chair specific dissertation committees in their area of research, when authorized by the Doctoral Program Sub-Council and the graduate dean.

**Practicing Professional Membership** is available to faculty who have a substantial interest in graduate education, and for whom a demonstrable departmental or program need exists. Faculty nominated for membership in this category shall be expected to hold the terminal degree or its equivalent in training and/or experience (documentation required when equivalency is claimed) and must be practicing professionals in the program degree area. Responsibilities may include graduate teaching, serving as members of thesis and dissertation committees and graduate student mentoring.

A complete listing of graduate faculty is available in the Graduate School office. Departmental lists are available in the main office of each department. Students are advised to consult this list when selecting faculty advisers for theses and dissertations.

**Faculty Restriction**

Faculty members of WSU who hold the rank of assistant professor or higher cannot earn graduate degrees from Wichita State except for unscheduled faculty (not attached to a particular college) or faculty members granted specific approval by the Graduate Council. Full-time faculty members may not pursue more than 6 hours of graduate credit per semester.

**Graduate Coordinators**

The Graduate School works closely with individual program areas to ensure that program operations function in compliance with Graduate School policies and regulations. As part of this process, a graduate faculty member is recommended by his or her department chair to the graduate dean for appointment as the graduate coordinator, to serve as the program representative to the Graduate School in matters of graduate education.

Although the nature of graduate coordinator appointments and responsibilities varies throughout program areas, they have a primary role in working with students and faculty in their academic programs.

As a standard of expectation, graduate coordinators are charged with the responsibility for overseeing the evaluation of applications for admission and the transmittal of departmental recommendations for admission, academic performance, degree completion, and exceptions to graduate school regulations.

Graduate coordinators also have a primary role in coordinating information between their programs and the Graduate School office, working with their departmental chairs or other administrators in maintaining the quality and viability of their graduate programs, and serving as the local agent for the graduate faculty in their program areas.

Graduate coordinators may also serve on graduate committees in their programs or academic colleges.
Admission to Graduate Study

In order to receive graduate credit at Wichita State University, students must be admitted to the Graduate School. Two admission statuses, degree and nondegree, are available to accommodate qualified students desiring to pursue graduate degrees as well as those simply desiring to earn graduate credit for personal and professional reasons.

To be considered for degree or nondegree graduate status, students must submit a completed Application for Admission and appropriate credentials to:

Graduate School
Wichita State University
1845 Fairmount
Wichita, Kansas 67260-0004

Students may apply online through the Graduate School Web site at: wichita.edu/gradschool.

Paper application forms may be requested by calling the Graduate School at (316) 978-3095, by e-mail at: gradinqu@wichita.edu, or through the Web site listed above.

Admission is based primarily upon an applicant’s previous academic record; therefore, two official transcripts of all previous academic work—including community college work, or work transferred to the degree-granting institution—must be received in addition to the application and application fee. The review criteria of student credentials for both domestic and international applicants are equivalent; differing only to account for variations in how the academic work is recorded.

Wichita State University transcripts do not need to be ordered, but academic work and degrees from WSU must be declared on the application form. The fact that courses completed at one institution may be included on a transcript from another institution is not sufficient. Official transcripts may either be mailed directly to the Graduate School office from each institution, or the applicant may submit official copies to student transcripts. Please note that in order to be accepted, issued to student transcripts. Please refer to the Levels of Admission section regarding the details of these options.

Admission Application

Applications for graduate study are made through the Wichita State University Graduate School regardless of the program. In addition to the Graduate School’s application, certain program areas will also require a program application.

Records required for admission to programs without application deadlines, and from applicants not requiring visa status, should reach the Graduate School at least three weeks before registration for the semester in which admission is desired. Materials received after this date will be processed as the time of staff and faculty permits, but the Graduate School cannot guarantee final action can be taken in time to allow enrollments for graduate credit.

Because of possible limitations in the number of faculty and available facilities, there are restrictions on the number of students admitted to some graduate programs. These limits may prevent some qualified students from being admitted. Since programs with enrollment limitations generally take action on new applicants in February or March for fall admission, early application is recommended. Preference is usually given to degree-seeking applicants.

All application materials in the folders (at the Graduate School and departmental levels) may be reviewed by the applicant upon request, except recommendation forms/letters where the applicant has waived his or her right to see the recommendations.

An admission to the Graduate School remains valid only if a student enrolls and completes at least one class as a graduate student within one calendar year of the admission semester. However, students admitted to the Physician Assistant or Physical Therapy programs must enroll the semester of admission in order for their admissions to remain valid. Students may not apply to more than one program at a time. Submission of a second application will result in the cancellation of the first application.

Admission Application Fee

All applicants to the Wichita State University Graduate School must pay a nonrefundable application fee each time an application is submitted. The application fee is:

$65 for students who will require a visa status; and

$50 for American citizens or lawful permanent residents (proof of green card will be required).

Admission Deadlines

The following are deadlines for submission of complete application materials for all applicants seeking on-time registration, except those applying for admission to programs in anthropology, audiology, business administration, communication sciences and disorders, creative writing, educational leadership, English, liberal studies, physical therapy, physician assistant, psychology, public administration, social work, and studio arts.

Applicants to the program areas identified above should refer to departmental information in this Catalog for admission deadlines.

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<tr>
<th></th>
<th>International Students</th>
<th>Permanent Residents</th>
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<tbody>
<tr>
<td>Fall semester</td>
<td>April 1</td>
<td>July 15</td>
</tr>
<tr>
<td>Spring semester</td>
<td>August 1</td>
<td>December 1</td>
</tr>
</tbody>
</table>

Admission Preparation

Applicants with bachelor’s degrees in programs in which credit was awarded for experiences which were outside the control of a regionally accredited educational institution, for example, credit for life experience, may be viewed by some programs as inadequately prepared to undertake graduate study. In such instances, admission to the Graduate School may be denied or approved with prerequisite coursework assigned to fill the deficiencies.

Levels of Admission

Full Standing. Students who have fulfilled all of the admission requirements for a given program, including admission grade point average, entrance exams if required, reference and credentials if required, and have 9 hours or less of prerequisites, may be granted admission on a full-standing basis. Students admitted to full standing are eligible for consideration for assistantships and federally funded financial aid.

Conditional Status. Students who may have background deficiencies in excess of 9 hours or who have not submitted required references, examinations, and so forth, but who otherwise have met the full-standing degree program requirements, may be granted admission on a conditional basis. Students are allowed one semester to submit the remaining credentials, including test scores, and one year to remove
background deficiencies. Transfer to an appropriate nondegree category will result if the necessary conditions are not satisfactorily met. Students admitted with conditions are not eligible for federally funded financial aid, but may be considered for graduate assistantship positions.

**Probationary Status.** Students who do not meet the minimum academic requirements for full-standing degree program admission may be admitted on probation when reasonable evidence exists to indicate their ability to do satisfactory degree program work. In order to clear the probationary status, students must complete their first 9 hours of graded graduate-level coursework at Wichita State University with a minimum 3.000 grade point average. Only courses numbered 500 and above which are letter graded (A, B, C, D, F) can be used toward the 9-hour requirement. S/U courses and Cr/NCr courses will not count toward the 9-hour requirement.

Students who have a graduate history at WSU must also raise their graduate grade point average to 3.000 or better to be removed from probation.

Students admitted on probation or placed on academic probation following admission are not eligible for assistantship awards or federally funded financial aid.

**Admission Requirements**

**Degree Admission**

To pursue a graduate degree at WSU, students must be admitted to the specific program for which they are seeking a degree. Students may not be admitted to more than one degree program at a time.

**Specialist and Master's Programs**

Applicants for full-standing degree admission to the specialist and master's programs must have:

1. Earned a bachelor's degree from a regionally accredited institution or a recognized institution in another country whose requirements for the bachelor's degree are substantially equivalent to an American bachelor's degree. The basis on which credits are awarded for the bachelor's degree must be consistent with the policies and procedures for the award of such credit at Wichita State.

2. A grade point average of at least 2.750 based upon the last 60 hours or nearest semester or term break to this, including any post-bachelor's graduate work.

3. A student may have no more than 9 hours of background deficiencies in the desired field of graduate study. Some departments may require a higher minimum grade point average.

Although an entrance exam is not a requirement for admission to the Graduate School, certain program areas require either the Graduate Record Exam (GRE), the Graduate Management Admission Test (GMAT), or the Miller Analogies Test (MAT). Applicants should refer to the program and admission requirements table on pages 4 and 5 to determine if a specific program requires an entrance exam.

See page 14 for entrance exam contact information.

**Doctoral Programs**

Applicants for full-standing degree admission to the doctoral programs must meet the following requirements:

1. Hold a bachelor's degree from a regionally accredited institution or a recognized institution in another country whose requirements for the bachelor's degree are substantially equivalent to an American bachelor's degree. The basis on which credits are awarded for the bachelor's degree must be consistent with the policies and procedures for the award of such credit at Wichita State.

2. For programs where the minimum requirement for admission is the bachelor's degree, students must achieve a grade point average of at least 3.000 in the last 60 hours or nearest semester or term break to this, including any post-bachelor's graduate work.

3. A student may have no more than 9 hours of background deficiencies in the desired field of graduate study.

Although an entrance exam is not a requirement for admission to the Graduate School, certain program areas may require the Graduate Record Exam (GRE). Applicants should refer to the program and admission requirements table on pages 4 and 5 to determine if a specific program requires an entrance exam.

**Nondegree Admission**

Persons who already possess a graduate degree, who do not wish to seek an additional graduate degree at this time, or who wish to take graduate courses for professional advancement or personal satisfaction, should apply for nondegree admission. Students originally admitted to a nondegree category may later apply for degree admission. A maximum of 12 hours of graduate credit taken while in a nondegree category may be counted toward a degree program, provided students have obtained the approval of their major departments and the graduate dean, through submission of the plan of study.

**Nondegree, Category A**

Admission to this category provides students the opportunity to take any level of graduate coursework for which they have the prerequisites. Nondegree applicants seeking graduate certificates must be admitted under this category. Upon satisfactory completion of a course, credit is placed on a Wichita State University graduate transcript. However, only credit earned in courses numbered 500 and above is counted as graduate-credit work.

Students applying for admission in this category must meet the following requirements:

1. A bachelor's degree from a regionally accredited institution; and

2. A grade point average of at least 2.750 based upon the last 60 hours of coursework (or nearest semester or term break to this), including any post-bachelor's graduate work. Some programs require higher grade point averages and other admission credentials.

Students who do not meet the 2.750 grade point average requirement may be admitted to this category on probation if reasonable evidence exists to indicate their ability to perform satisfactorily in 800-level or above coursework.

Although there is no application deadline for nondegree, category A admission, applicants are encouraged to provide the following items no later than three weeks prior to the start of the semester in which they wish to enroll:

1. A completed and signed application form; and

2. Application fee; and

3. Two (2) official transcripts of all academic work including the bachelor's or a previous master's degree. WSU transcripts will be ordered by the Graduate School for applicants who have completed WSU coursework.

**Nondegree, Category B**

This category is specifically for students who are not seeking a graduate degree but who want to continue personal and professional development beyond the bachelor's level through enrollment in certain graduate-level courses, including workshops. Students in this category are restricted to enrollment in courses numbered through 799 and for which they have the prerequisites. Credit earned in category B status is placed on a Wichita State University graduate transcript; graduate credit is awarded for courses numbered through 799.

Students applying for admission in this category must have earned a bachelor's degree from a
Students may request a reactivation form available at: Wichita State University, but have not enrolled in
regions previously enrolled for a reactivation form. The completed application packet should contain the following:
1. A completed and signed application form;
2. Application fee; and
3. Two (2) official transcripts of a bachelor's degree from a regionally accredited institution or a copy of a teaching certificate.

Graduate Certificate Programs
Graduate certificates are awarded to students who desire interdisciplinary coursework to complement their graduate degree program or who, for academic, personal, or professional reasons, desire graduate-level education not leading to a graduate degree.

Students seeking graduate certificates must be admitted to the Graduate School in a degree program or in nondegree, category A status. All Graduate School policies relative to the admission criteria mentioned previously apply.

Students completing the requirements for a graduate certificate program must submit the Graduate Plan of Study form and the Application for Degree form no later than the 20th day of the fall or spring semester or the tenth day of the eight-week summer term when certificate completion is anticipated.

The graduate plan of study is prepared in conjunction with the adviser of the graduate certificate program area and is forwarded to the dean of the Graduate School. Graduate departments offering graduate certificates should have a process for knowing who is completing certificate work. Certificate advisers are expected to inform students that a plan of study and certificate degree forms are required according to the above deadlines.

Graduate Guest Admission
Graduate students in good standing at another regionally accredited graduate school may be admitted as visiting guests. Such admission is valid only for the duration of the academic year. Admission requires the submission of a completed application and application fee, and a signed letter from the student's home institution certifying the student's status as a graduate student in good standing. Visiting guests must have their school's permission to take up to one semester's work for transfer back to their home institutions. If enrollment is desired beyond one semester, students must obtain regular admission.

English Proficiency
Proof of English proficiency may be required for U.S. citizens or permanent residents who are non-native English speakers. Please review the more detailed English proficiency section on the following page for additional information.

Graduate Readmission Following Academic Dismissal
Following academic dismissal, students who wish to be considered for readmission to Graduate School must first complete a minimum of 9 hours of 500 level or above letter-graded coursework, selected with appropriate advisement. Even if credit was earned in these courses, students are not allowed to repeat the same courses for additional credit.

Graduate School for regular graduate admission and also complete a senior rule application form. Both forms are due in the Graduate School no later than two weeks before the semester in which the student intends to enroll under the senior rule option.

Approval is needed from the student's major adviser, the chairperson or graduate coordinator in the program in which the work is to be taken, the undergraduate dean of the student's college, and the dean of the Graduate School before any courses can be taken for graduate credit. In addition, students from other institutions must be admitted as undergraduates (possibly as guest students) through the WSU undergraduate admissions office. Tuition for graduate courses will be assessed at the graduate rate.

Admission to Dual/Accelerated Bachelor's to Master's Degree Programs
The dual/accelerated bachelor's to master's degree programs offer outstanding students the opportunity to advance their career in a significant way by pursuing the bachelor's and master's degrees in a parallel and coordinated program. In addition, it may be possible for the students to complete the requirements for both degrees (in the same field) in an accelerated time frame. The goal of this program is to provide students with a high level of academic advising culminating in the preparation of the graduate program of study while the student is still in their sophomore or junior year. Graduate education involves a close working relationship between a student and a graduate faculty mentor, and the dual/accelerated degree programs develop this relationship early in a student's career. Dual/accelerated degree programs are available in:

- BA to MA in economics
- BS (in industrial or manufacturing engineering) to MS in industrial engineering
- BS to MS in mechanical engineering
- BSN to MSN in nursing
- BS to MS in mathematics

Each dual/accelerated program has specific admission requirements. Students should consult with the department's graduate coordinator, if they are interested in this type of program.

WSU Former Graduate Students in Inactive Status
Students who have completed coursework at Wichita State University, but have not enrolled in the past 24 months, are placed in inactive status. To enroll again, inactive students must complete a reactivation form available at: wisc.edu/registration. Students may request a paper form by calling (316) 978-3055 or faxing a request to (316) 978-3795. This should be done at least one month before any planned enrollment.

Because of changes in program requirements, periods of non-enrollment may result in the need to complete an application for readmission to the program.
Information for International Applicants

1. All Graduate School policies relative to the admission criteria mentioned previously apply. The formal admission of international students is a two-part process. The first part evaluates academic admissibility based upon the application form and transcripts or mark sheets provided. Applicants recommended for admission will be notified by the Graduate School of their eligibility for admission and the application will begin the second part of the admission process. The second part requires the demonstration of sufficient English proficiency (TOEFL) and financial resources (WSU Statement of Financial Responsibility) to support graduate work in the United States.

2. The first semester of enrollment at WSU for all international graduate students must be in the program to which the student was admitted.

Transcripts

Two (2) official copies of the undergraduate transcript translated into English are required. If the transcript does not indicate the award of a bachelor’s degree or its U.S. equivalent degree, official copies of the degree statement or diploma are required.

International applicants who have completed graduate work or have attended an American university will need to have two (2) official transcripts showing that work sent directly from the institution, or may submit official issued to student transcripts. Please note that in order to be accepted, the transcripts must be received in the Graduate School office in envelopes sealed by the issuing institution.

Graduate programs (with the exception of aerospace engineering, social work, nursing, and physician assistant) will evaluate international applicants based upon official transcripts or mark sheets through the equivalent of the first semester of the applicant’s final year of study. In most instances, this will be the seventh semester of study. For international students on a yearly program, this will be the sixth semester.

In this instance, applicants who are recommended for admission and who have met all other admission requirements will be notified of admission and issued the I-20 form. Students admitted in this manner must provide the remaining transcript or mark sheet and the degree certification statement or diploma by the end of their first semester of enrollment as graduate students at WSU. Students who fail to meet this final requirement will be designated as out of compliance and will be reported to the university’s Office of International Education.

English Proficiency

Applicants whose native language is not English must submit official, acceptable scores for either the TOEFL, or the Academic Module of the IELTS examination. To be acceptable, the score must be sent to WSU directly from the testing agency, and must be less than two years old. Photocopies of score reports are unacceptable. The minimum acceptable scores for most programs are: TOEFL—79 on the Internet-based test; 213 on the computer-based test, or 550 on the paper-based test. IELTS—minimum overall band score of 6.5 is required. Some programs do have higher requirements for English proficiency. Please refer to the table below for specific information.

Waivers will be considered if the applicant has attended a university in the United States as a full-time student. Full time is defined as enrollment in academic only courses for a minimum of one year.

Waivers will also be considered if the bachelor’s degree was awarded from a U.S. university within two years of the proposed semester of admission at WSU.

The following programs currently require a higher score than the minimums stated above. The listing below includes only the Internet-based TOEFL and IELTS scores. For computer-based and paper-based equivalencies, please contact the Graduate School.

<table>
<thead>
<tr>
<th>TOEFL</th>
<th>IELTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business Admin.</td>
<td>88</td>
</tr>
<tr>
<td>Communication</td>
<td>100</td>
</tr>
<tr>
<td>Creative Writing</td>
<td>100</td>
</tr>
<tr>
<td>English</td>
<td>100</td>
</tr>
<tr>
<td>Gerontology</td>
<td>88</td>
</tr>
<tr>
<td>History</td>
<td>100</td>
</tr>
<tr>
<td>Physical Therapy</td>
<td>100</td>
</tr>
<tr>
<td>Public Admin.</td>
<td>100</td>
</tr>
</tbody>
</table>

Applicants interested in studying English at WSU prior to beginning their graduate studies should write to:

Intensive English Language Center
Wichita State University
1845 Fairmount
Wichita, Kansas 67260-0122
USA
Application forms may also be requested by e-mail at: international@wichita.edu.

Statement of Financial Responsibility

International applicants must demonstrate sufficient financial resources in order to support their graduate work in the United States. The WSU Statement of Financial Responsibility is the form that must be used to demonstrate such resources. Bank statements or letters from relatives or employers will not be considered as a substitute for this form.

International Transfer Students

International students transferring from universities in the United States must present the following items:

1. A completed and signed application for admission;
2. The non-refundable international application fee;
3. Three (3) or more official transcripts from each college or university attended in the United States, plus two (2) official copies of the undergraduate transcript translated into English. If the transcript does not indicate the award of a bachelor’s degree or its U.S. equivalent degree, official copies of the degree statement or diploma are required. Please see the last two paragraphs under the heading “Transcripts.”
4. Official, acceptable scores from either the TOEFL or IELTS. A waiver will be considered if the applicant has attended an American university in the United States as a full-time student in academic courses for a minimum of one year, or the bachelor’s degree was awarded from an American university within two years of the proposed semester of admission at Wichita State University; and

Mandatory Health Insurance

Wichita State University requires that all non-immigrant international students have a specified minimum amount of medical insurance protection for every semester they are enrolled as students at Wichita State University.

Each non-immigrant international student must obtain and maintain medical insurance from a company authorized to do business in the United States, with the following minimum coverages:

1. Basic injury and sickness benefits amounting to at least $10,000;
2. Major medical coverage in an amount of at least $100,000;
3. Coverage to provide for medical evacuation of the student to the student’s home country; and
4. Coverage to provide for repatriation of the student’s remains to the student’s home country in the case of death.
Failure to obtain and maintain such coverage during the student’s time of enrollment will be grounds for discipline up to and including expulsion.

**Exceptions to Regulations**
Departures from the rules and regulations stated in the *Graduate Catalog* require the filing and approval of an Application for Exception to Graduate School Regulations form. Such requests must have the approvals indicated on the form and must state in a logical and coherent manner a rational basis for the requested exception. Forms for such requests are available from the Graduate School and graduate program areas and may be downloaded from the Graduate School Web site. Unusual and/or substantial deviations from stated rules and regulations require action by the Graduate Council.

**Entrance Exam Contact Information**
Many graduate degree programs have entrance examination and GPA requirements (see the table on pages 4–5).

Please contact the appropriate organization for further entrance exam information:

- **GRE Graduate Record Examinations**
  Educational Testing Service
  P.O. Box 6000
  Princeton, NJ 08541-6000 USA
  gre.org

- **GMAT**
  Graduate Management Admissions Test
  Educational Testing Service
  P.O. Box 6103
  Princeton, NJ 08541-6103 USA
  gmat.org

- **TOEFL**
  Test of English as a Foreign Language
  Educational Testing Service
  P.O. Box 6000
  Princeton, NJ 08541-6000 USA
  toefl.org

- **IELTS**
  International English Language Testing System
  Please visit the IELTS Web site to determine which of the 350 testing centers in 120 countries is located nearest you: ielts.org
Enrollment

Load Definitions
At least 9 hours of graduate credit coursework is defined as full-time graduate enrollment during the fall or spring semester. During the summer session, a minimum of 6 hours is considered full-time graduate enrollment. Load (total credit hours) does not include audit enrollments. Students enrolling in all or a majority of courses that carry undergraduate credit must meet the undergraduate requirement for certification as full-time students (12 hours).

International students must enroll as full-time students (at least 9 hours of graduate credit coursework) each semester. Students placed on probation after admission are not allowed to enroll in more than 12 credit hours during semesters in which they are on probation.

Students holding assistantships should work with their advisers to arrive at a load appropriate to their situations.

Graduate students holding assistantships during a fall or spring semester are expected to enroll in at least 9 credit hours of graduate coursework, of which 6 hours must be at the graduate level. Exceptions to allow graduate assistants who hold a 20 hour appointment to be enrolled in 6–8 hours may be approved by the program in which the student is admitted. Special consideration for thesis and research enrollments may be obtained by filing an exception with the Graduate School.

Enrollment while on Probation
Students placed on probation after admission are not allowed to enroll in more than 12 credit hours during semesters in which they are on probation.

Senior Citizen Enrollment
In accordance with the Kansas Board of Regents’ policy, students who are 60 years of age or older may enroll with audit status (non-credit) in eligible academic credit courses—in which space is available and for which they have the prerequisites—without paying tuition and student fees. Facilities use fees will be assessed at the regular student credit hour charge. Senior citizens must present a Medicare card or driver’s license to validate age. A special senior citizen registration is held after the first day of classes (see Schedule of Courses).

Senior citizens desiring college credit or the assurance of space in specific courses may enroll and pay full fees during regular registration.

Course prerequisites apply to senior citizens as well as other students. People wishing to enroll under this program in courses numbered 800 and above must first obtain the written permission of the instructor.

Senior citizens who have not enrolled at WSU before must complete an application for admission and pay the application fee before registering. Application fees are $30 for undergraduate and $50 for graduate students.

Registration, Drops and Adds
The registrar establishes procedures for registration. Graduate students must enroll according to the procedures published in the Schedule of Courses. This publication is available on the university’s Web site for any given semester.

Newly admitted, currently enrolled, and former graduate students, not academically dismissed, are eligible for online registration. Some academic restrictions have been built into the system. Some restrictions cannot be overridden including nondegree, category B students enrolling in courses beyond the 799 level. Program specific restrictions may be considered for removal by contacting the appropriate program and requesting an electronic override.

Registration for a course or courses represents a commitment that the student is obligated to pay.

Once a student has enrolled, classes may be changed online for a certain period of time that varies according to the start date and length of the course. After the online period has passed, students must process in-person drop and/or add forms with the appropriate approvals. Changes of sections also require such action. If these forms are not submitted, a grade of F could be recorded for failure to attend the class shown on the original enrollment records.

Late enrollments or adds normally will not be approved after the 20th class day. Drops of classes with a grade of W (withdrawal) are subject to a time limit established by the registrar. Cutoff deadlines for dropping with a refund also vary according to the start date and length of the course. See the Schedule of Courses for more information.

Students who find it necessary to completely withdraw from the university must process a drop for each class.

Basic Fees
The tuition and fees listed are subject to change by the Kansas Board of Regents.

Basic fees for on-campus regular enrollment and continuing education credit courses follow:

<table>
<thead>
<tr>
<th>Type of Tuition</th>
<th>Resident</th>
<th>Nonresident</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undergraduate tuition*</td>
<td>$149.90</td>
<td>$417.70</td>
</tr>
<tr>
<td>Graduate tuition*</td>
<td>$208.35</td>
<td>$593.00</td>
</tr>
<tr>
<td>Student fee—graduate and undergraduate**</td>
<td>$27.60</td>
<td>$27.60</td>
</tr>
<tr>
<td>University registration fee—all students***</td>
<td>$17.00</td>
<td>$17.00</td>
</tr>
<tr>
<td>Facilities use fee— all students***</td>
<td>$3.60</td>
<td>$3.60</td>
</tr>
</tbody>
</table>

* Tuition and fees are for the fall and spring semesters and the summer session. ** The student fee is required of every student enrolled on the Wichita State University campus (City of Wichita, its contiguous industrial sites and the South and West Campuses). Proceeds from the student fee are distributed to pay for the Educational Opportunity Fund, student union, athletics, Haslett Center, student health services, forensics, student government association, student publications, and other student activities. *** Facilities use fee will be assessed to all students at the rate of $3.60 per credit hour, per semester and summer session capping the charge at 15 credit hours ($54.00).

Workshop and Off-Campus Fees
On-campus credit workshops cost $188.00 tuition and student fees, per credit hour. In addition, there is a $17 registration fee per semester and a facilities use fee of $3.60 per credit hour. A specific course fee of $169.90 (undergraduate) or $236.35 (graduate) per credit hour is assessed for off-campus regular enrollment and continuing education credit courses or workshops. In addition, there will be a facilities use fee of $3.60 per credit hour. Non-credit workshops on campus include a facilities use fee ($5.00 for workshops of seven or fewer consecutive days and $10.00 for longer-term workshops). Non-credit workshops off campus will not include a facilities use fee unless students choose to have a vehicle on campus.

Auditing Course Fees
Tuition and fees per credit hour for courses and workshops audited are the same as for courses taken for credit.

Payment
Tuition and fees, including any lab fees, are required to be paid in full for any course in
which a student is still enrolled after the deadline for dropping that course with a 100 percent refund.

An installment payment plan is available at the time of enrollment to assist students in making tuition payments. Any student who does not have financial aid from other sources sufficient to pay tuition and fees is eligible if the student has paid all previous obligations to the university. The installment plan requires a $130 non-refundable down payment which includes a $30 administrative fee making the installment plan interest-free. Installment plans must be repaid in two or three equal installments according to the deadlines for a given semester.

Assessment and Collection
The director of financial operations and business technology is responsible for the assessment and collection of fees. The associate director, a college associate dean, a representative of the affirmative action officer, and representatives of the vice president for campus life and university relations, constitute the board of appeals for students who believe their residency status has been incorrectly assessed. The decision of this committee is final. Forms to initiate this process are available in the registrar’s office, 102 Jardine Hall. The form can also be downloaded online by going to wichita.edu/registrar and clicking on the link called Residency. A link to the form is located in the Appeals section of the page.

Unpaid Fees
Students who leave Wichita State University without meeting their financial obligations to the university may have their records impounded by the registrar. Their transcripts or diplomas will not be issued unless their accounts are cleared, and they may not enroll for a new term unless all fees are paid.

Students who are eligible to graduate but who still have unpaid tuition balances will not graduate until those fees are paid.

Military Refund Policy
Students serving in the National Guard or Reserves who are called to active duty during an academic term are entitled to receive a full refund of tuition and fees. Students who are drafted and must report for active duty during an academic term are entitled to receive a full refund of tuition and fees. All refunds are subject to presentation of official documentation. Students who volunteer for military service will be subject to the university’s non-military refund policy. Room and board charges will be prorated to the extent that services have been provided.

Tuition Waiver for Kansas Teachers of the Year
Kansas Teacher of the Year recipients are allowed to enroll tuition-free in up to 9 credit hours annually, provided they are actively pursuing a teaching career in Kansas. To be eligible, a person must be (1) a past or present recipient of the Kansas Teacher of the Year award and (2) employed as a teacher in an educational institution accredited by the Kansas Department of Education. A list of persons eligible for this tuition waiver is on file in the Board of Education office.

Residency Defined
The residence of students, for tuition and fee purposes, is determined by acts of the Kansas legislature, rather than university policy. The legislature has also granted the Kansas Board of Regents certain authority to adopt regulations and guidelines for the determination of residency, within the broader state law. The law and regulations are different than those that govern residency for any other purpose.

According to Kansas law and regulations, a resident, for tuition purposes, is someone who has resided (been physically present) in Kansas for 12 consecutive months prior to enrollment/reenrollment and who has demonstrated, during those 12 months, the intent to make Kansas his or her permanent home. Intent is evaluated in light of: (1) the person’s statement about why she or he came to Kansas in the first place, and (2) what the person has done since coming to Kansas (objective, verifiable facts). Many factors are considered when evaluating intent. The Kansas Board of Regents’ guidelines list non-conclusive factors or circumstances that could help support a claim for resident classification. The guidelines also specify a qualifier: “Any such factor, to be given weight, must be of at least one year’s duration prior to enrollment/reenrollment.”

Residents of Kansas (for fee purposes) who leave the state retain their residency as long as they return to Kansas permanently within 60 months of departure.

A person who comes to Kansas to go to school, and who enrolls full time every semester after arriving, may not be able to demonstrate the intent to remain in Kansas permanently, as long as that pattern continues. In contrast, certain “exceptions” are authorized by state law to pay the equivalent of resident fees: (a) regular employees of the university and their spouses and dependent children (does not apply to student assistants and graduate assistants); (b) persons on full-time active military duty, stationed in Kansas, or members of the Kansas Air or Army National Guard, and their spouses and dependent children; (c) persons who were in active military service in Kansas and who were discharged or retired in Kansas; (d) persons who graduated from a four-year program at an accredited Kansas high school within six months of their enrollment at a state university, and who were Kansas residents for fee purposes at, or within 12 months of, high school graduation; (e) dependent students as long as at least one parent is a Kansas resident for fee purposes; (f) persons who were recruited to, or transferred to Kansas within the last 12 months for a full-time job, and their spouses and dependent children; and (g) any person who is attending or has attended Haskell Indian Nations University and who is enrolled as an American Indian on a tribal membership roll maintained by the Bureau of Indian Affairs of the U.S. Dept. of the Interior.

The details about each of these exceptions are critical and are not all on this page. Several require certification of appropriate information on a special form. None of them is automatic! Contact the registrar’s office for more information.

Effective July 1, 2004, a person who is residing in Kansas and would not otherwise be considered a resident of Kansas will be considered to be a resident for tuition purposes if she or he has attended three years of high school in Kansas and graduated from an accredited Kansas high school or earned a Kansas GED and she or he is not on a student visa or eligible to pay resident rates in another state. This can apply to people with a non-permanent immigration status, undocumented aliens, and former Kansans who have not been back in Kansas long enough to reestablish residency. This law does not apply to an eligible person’s spouse or dependents.

Procedure: People who have been admitted as non-residents and think they are eligible to be considered residents because of this provision should contact the registrar’s office. The three years of high school in Kansas (includes 9th grade), and Kansas high school graduation, must be documented. It doesn’t matter when the person attended or graduated. Aliens with non-permanent resident status must document that. Aliens must sign an affidavit indicating that they will apply for permanent residency as soon as they are eligible. All students must sign an
Regents and in accordance with Article 4, Section 884-1, et. seq. of the Kansas Administrative Regulations.

**Drop/Add Fee Policy**

Students who drop credits and do not add credits will be charged the proportional percentage based on the week they drop the credits. The percentages are published in the Schedule of Courses.

Students who drop and add credits will not be required to pay additional tuition/fees if the following conditions are met:

1. The drop and add occurs in one transaction; and
2. There are an equal number of credit hours added as are being dropped, and the credit hours have an equivalent charge.

A course that has been added in accordance with parts 1 and 2, and is subsequently dropped, will retain the same refund percentage as the original course dropped.

Refunds of tuition and fees will be granted for withdrawals in accordance with the dates and regulations published in the Schedule of Courses for a given semester. Requests for refunds which occur after the close of the regular refund period must be submitted on the Refund Waiver form and presented to the Office of Financial Operations and Business Technology, 201 Jardine Hall. Students who register late or fail to attend the first class day after registration, who withdraw fully from the university for the first time and are eligible by policy for a tuition refund. These are separate issues and decisions.

Federal regulations may require students attending the university for the first time and receiving student financial aid (grants, loans, or work assistance) under Title IV, or whose parent(s) receive(s) a loan under Title IV on behalf of the students, who withdraw fully from the university to be subject to a different refund policy. Contact the Office of Financial Operations and Business Technology for details.

**Student Identification**

Each student is identified in the university’s computer system by a unique set of eight numbers and letters, called myWSU ID. This ID is assigned and communicated to students at the time of admission. A social security number is also required for everyone who has federal financial aid or is employed by the university, as they must also be identified in the system by their social security number.

All WSU students are required to have a WSU photo identification card called the Shocker Card. The card does not expire and is used to determine a student’s current enrollment status. The initial card is free. Lost, stolen or discarded cards may be replaced for a fee.

The Shocker Card contains a unique 16 digit ISO number encoded on it and is the only means by which students can use the following services: Ablah Library, Heskett Center, athletic ticket office, student government, student health services, WSU police department.

**Transcripts**

A transcript is a certified copy of a student’s permanent academic record. It contains confidential information and cannot be furnished/released without the student’s signed, specific request. Transcripts may be ordered in person at the registrar’s office or by submitting a request form.
via mail or fax. Request forms and more detailed information are available at wichita.edu/registrar. A person’s undergraduate and graduate transcripts may be ordered separately. Official transcripts are $8 per copy, paid in advance. An additional $10 fee will be charged for all expedited service (same day) requests. Normal service is three to five business days. Additional fees for faxing a transcript or for mailing it by other than first-class postal rates also apply. All transcripts sent to or provided to the student are stamped Issued to Student. Some institutions will not accept transcripts that are Issued to Student.

All transcript requests, whether received in person or via mail/fax, must be accompanied by a readable copy of government-issued photo identification such as WSU ID, driver’s license, passport or military ID. Requests will not be processed without this ID.

Mailed transcript requests should be sent to:
Attention: Transcripts
Office of the Registrar
Wichita State University
1845 Fairmount
Wichita, Kansas 67260-0058

Reminder: No one, including spouse or parent, can request or pick up another person’s transcript without written authorization and proof of identity from that person.

If a person still owes the university money, or has not returned borrowed university property, transcript services are withheld.

Withdrawal—Administrative
Administrative withdrawal may be initiated by the graduate dean for the following reasons:
1. The student’s class attendance is so irregular that in the instructor’s opinion full benefit cannot be derived from the course;
2. The student fails to withdraw from one or more classes by the official procedure given in the Wichita State University Schedule of Courses;
3. The student does not meet the conditions for enrollment in courses numbered 800 and above; or
4. The student violates the provisions of the Student Responsibility statement or Code of Conduct statement. (See page 37.)

Exceptions to Regulations
Departures from the rules and regulations stated in the Graduate Catalog require the filing and approval of an Application for Exception to Graduate School Regulations form. Such requests must have the approvals indicated on the form and must state in a logical and coherent manner a rational basis for the requested exception. Forms for such requests are available from the Graduate School and graduate program areas and may be downloaded from the Graduate School Web site. Unusual and/or substantial deviations from stated rules and regulations require action by the Graduate Council.
Academics

Graduate Advisers
Various patterns exist for advising graduate students. Some programs have a central plan for new graduate students, after which individual advisers are assigned. Other programs assign new graduate students to advisers early in their graduate program. Coursework taken without the adviser’s expressed approval is not automatically applicable toward a graduate degree.

In all instances, advisers should be familiar with Graduate School rules and regulations as well as program and departmental requirements. While graduate students have the primary responsibility to know the rules and regulations and to fulfill the program requirements for their graduate degree, advisers’ knowledge and expertise can assist students in their progress toward the degree.

An adviser assigned at the time of admission to a doctoral program will assist the student in completing initial tasks such as enrollment, coordination of examinations, submission of a plan of study, and the formation of a supervisory committee. Depending on individual program procedures, the adviser may chair an advisory committee which also will be involved in the advising activities above. It is possible for the adviser to be named as chairperson of the supervisory or dissertation committee.

Students with assigned advisers should consult their advisers for information on course prerequisites, content, and similar matters.

Graduate Courses
Courses carrying graduate credit are listed in the Graduate Catalog. Only courses numbered 500 and above can carry graduate credit and only for students admitted to the Graduate School at the time of enrollment.

Courses numbered under 500 carry undergraduate credit only and may be taken as supporting or prerequisite courses, but may not be counted toward a graduate degree and are not computed in a student’s graduate grade point average.

Courses numbered 500 to 699 are aimed primarily at juniors and seniors, but graduate students may also receive graduate credit for these courses if the student was admitted to Graduate School prior to enrollment in the course. Some graduate programs do not allow courses numbered 500 through 699, which carry graduate credit, to meet degree requirements and students should be aware of such restrictions before enrolling. In such mixed classes, a discernibly higher level of performance is expected from graduate students, with the nature of this differential performance set by the professor.

Courses numbered 700 to 799 are structured primarily for graduate students, but upper-division undergraduate students may be admitted if they meet course prerequisites. In such mixed classes, a discernibly higher level of performance is expected from graduate students, with the nature of this differential performance set by the professor.

Courses numbered 700–899 are designed primarily for Graduate I students (students who ordinarily have not accumulated more than 30 hours in a graduate program). Courses numbered 900–999 are designed primarily for Graduate II students (those who ordinarily have completed more than 30 hours in a graduate program).

Courses numbered 800 and above are restricted to graduate students only or undergraduate students approved for enrollment under the senior rule option.

In special cases, courses in areas where graduate degree programs are not currently available may carry graduate credit and apply toward a graduate degree in a related field or simply count as graduate credit for some nondegree purpose. Any of these courses applied toward an advanced degree program must have the approval of the student’s adviser and the chairperson of the department involved in advance of enrollment.

Grievance Procedures
The following statements are designed to provide guidance to graduate students in protesting an actual or supposed circumstance in which they feel they have been wronged.

Conflicts eligible for resolution under these procedures are restricted to academic matters other than grades. Disputes about grades are resolved through the Student Court of Academic Appeals.

These procedures do not include conflicts covered by other policies in the university. Grievances can be initiated for circumstances which are within one year from the time of occurrence.

Steps in the process:
1. A student with a grievance should first consult with the faculty member or administrator perceived to be causing the circumstance which has resulted in the feeling of being wronged and attempt to resolve the conflict at that level.
2. Failure to resolve the conflict in the first step may lead to an appeal at the chairperson or college dean level, depending on who is perceived as causing the circumstance. If available, the student should attempt to resolve the grievance through discussions with the department chairperson, college dean, or through use of departmental structures which may exist for this purpose.
3. If the student has exhausted the remedies provided in steps one and two without success, the student should schedule a meeting with the dean of the Graduate School or the dean’s designee (see “Role of the Graduate Dean” below). Grievances or appeals must be in writing.

Role of the Graduate Dean: The dean of the Graduate School or the dean’s designee receives complaints or protests and decides whether to take direct administrative action to resolve the conflict or refer the grievance to the Graduate Council. A decision of the graduate dean may be appealed to the Graduate Council.

The decision of the dean of the Graduate School on recommendations received from the Graduate Council is final.

Role of the Graduate Council: In addition to being the elected representative of the graduate faculty, the Graduate Council serves as the Committee on Exceptions in an advisory capacity to the dean of the Graduate School. This responsibility may be discharged by the council acting as a committee of the whole, through subcommittees, or ad hoc committees consisting of selected members of the graduate faculty and graduate student body.

Conclusions reached by the Graduate Council will be transmitted as recommendations to the dean of the Graduate School.

The Graduate Council also serves as a committee on appeals if the student is dissatisfied with direct administrative action taken by the graduate dean. In such cases, the judgment of the council is final.

Court of Student Academic Appeals
The faculty at Wichita State has established a procedure to resolve disputes arising out of the classroom through the Court of Student Academic Appeals. The court hears appeals from students who believe they have been treated unfairly in grading or in an instructor’s charges of plagiarism, cheating, or similar offenses. The court is designed to help resolve differences that
cannot be settled in the framework of the student-faculty relationship and offers an important safeguard for students.

The student must file an appeal within one semester after the grade is assigned (excluding summer). The court may waive the time limit if documented and verifiable exceptional circumstances cause a delay in submitting the appeal.

Any student may use the appeal procedure. Forms are available in the dean of students office, 303 Grace Wilkie Hall. The general procedure is explained to students when they pick up the form.

Audit Credit
Students are permitted to attend credit courses on a non-credit basis, with appropriate approval, under an auditor classification. To be enrolled as auditors, students must enroll in the same manner and pay the same fees as for credit courses at the university. Auditors may participate fully in the class and expect instructor evaluation of their work. Auditors are expected to attend class regularly. The audited course will appear on the transcript with the grade notation of Au. A student’s load (total credit hours) does not include audit enrollments. Courses taken on an audit basis may be repeated for credit, and if repeated may be used to fulfill degree requirements if the repeated grade is acceptable. Use of the audit basis for a course must be declared at the time of enrollment. Audited courses are not eligible for financial aid.

Independent and Directed Study Courses
A primary goal of the Graduate School is to encourage independent scholarship. Thus, graduate students have many opportunities to engage in self-initiated independent study under the supervision of an individual member of the graduate faculty.

In addition to traditional titles, such as thesis, research project, internship, and practicum, various departments use various titles to identify opportunities for individual study (e.g., independent study, special problems, directed readings, individual projects, and directed study). The following requirements govern enrollment in independent study offerings:

1. Consent of the instructor must be obtained before enrollment;
2. The content of the study should not be the same as that covered in a regular course (exceptions to this requirement must have the approval of the graduate dean before enrollment);
3. Although scheduled on an arranged basis, there must be a sufficient number of contact hours between the student and supervising instructor during the duration of the independent study to ensure consistency with the amount of graduate credit earned in regular course offerings; and
4. No more than 6 hours of independent study coursework (excluding dissertation, thesis, and other independent study activities that are terminal requirements for a degree) can be used in a degree program.

Some programs have additional program requirements that must be met before enrolling in independent study courses. Students should consult the appropriate program personnel before enrolling.

Grading System
Wichita State grades include A (excellent), B (good), C (satisfactory), D (unsatisfactory), F (failure), W (withdrawal), Gr (credit), NG Gr (no credit), S (satisfactory), U (unsatisfactory), I (incomplete), IP (in progress), NG S (no grade submitted), and Au (audit). Passing grades include A, B, C, D, Gr; and S. The grades F, NGr, and U indicate that the quality of work was such that, to obtain credit, the students must repeat regular coursework. A plus/minus grading system was adopted beginning fall 2009. It applies to grades of A, B, C, and D.

Credit Points. For each hour of work the student takes, credit points are assigned, as follows, to permit averaging of grades:

\[
\begin{align*}
A &= 4.000 \\
A- &= 3.700 \\
B+ &= 3.300 \\
B &= 3.000 \\
B- &= 2.700 \\
C+ &= 2.300
\end{align*}
\]

Related details:

- B or better grade required: B- will fulfill this requirement unless otherwise indicated.
- C or better grade required: C- will fulfill this requirement unless otherwise indicated.
- I Incomplete. Temporarily recorded as a grade when a student is granted an extension of time to complete coursework. Credit is postponed and the course is not included in the student’s grade point average until it is completed and a regular letter grade is assigned. An incomplete grade should be assigned only when instructor and student have communicated and agreed upon the conditions and time frame for completing the work. See Change of Grades section for details.

Repeats
A graduate student may enroll in graduate courses (for credit) a second or subsequent time and have it counted as part of the semester’s load. If a course is repeated, the Graduate School will consider that the last grade earned replaces the original grade for purposes of admission and degree completion (in calculating initial and subsequent admission GPAs, in certifying the student’s eligibility for graduation, in certifying completion of certificate programs, and in computing the WSU grade point average). Although the last grade earned becomes the grade of record (replaces original grade), the original course grade remains on the graduate transcript.

Repeated courses are identified on the transcript by an extra letter after the grade: I included in GPA
E Excluded from GPA

Within existing departmental and university guidelines, WSU courses repeated at another institution may be used to complete program requirements, but the repeat grade will not be counted in the WSU grade point average (as transfer courses are not counted in the WSU grade point average).

Grades
Coursework for graduate credit is normally graded A, B, C, D, or F. Faculty also have the option of assigning an I (incomplete) if they feel that sufficient justification exists for the student’s failure to complete the course.

The graduate grade point average includes only those courses taken at WSU for which graduate credit is earned and for which a regular letter grade (A, B, C, D, or F) is assigned. For repeated courses, only the last assigned grade is used to calculate the WSU graduate grade point average. WSU courses repeated at another institution may be used to fulfill program requirements; however, the repeated course transferred from another institution will not be counted in the WSU graduate grade point average, nor will it replace the grade received at WSU. Courses transferred from another institution and graduate credit courses graded S (satisfactory) do not affect the graduate grade point average.

To remain in good standing in a graduate degree program, students must maintain a grade point average of at least 3.000 in all courses on the student’s graduate plan of study (excluding all transfer work) and for all graduate work taken at WSU. Grades lower than C, (generating less than 2,000 grade points), cannot be used to
satisfy degree requirements, but such grades earned, beginning fall 2001, may be repeated.

**Satisfactory/Unsatisfactory Graded Courses**

Certain approved courses that carry graduate credit are graded S/U (satisfactory/unsatisfactory) for all students enrolled. Such courses are identified in the Schedule of Courses, or students enrolling in special offerings for graduate credit will be informed of the S/U grading by the instructor if this system is to be used. Students wishing to transfer graduate coursework graded S/U to a degree program at another institution should, before enrolling, inquire of that institution's willingness to accept credit graded in this manner.

No more than 6 hours of work graded S or Cr may be used toward the requirements of a graduate degree (excluding dissertation, thesis, and other independent study activities that are terminal degree requirements). Refer to individual program areas as they may differ regarding this 6-hour limit.

**Final Grade Reports**

At the end of each semester, students may access and print their final grades through the myWSU portal option on the university Web site: wchita.edu.

**Change of Grades**

**Incomplete**. Students desiring credit for an incomplete grade assigned spring 1999 or later for regular courses (excluding research, dissertation, thesis, and other independent study activities that are terminal degree requirements) must complete their work within two semesters, excluding summer. If the work is not completed within those semesters and credit is desired, students must enroll in the course(s) as a repeat. If they enroll in the course again, the program assigning the original I will need to change the I to a W, and the grade earned during the repeat semester will become the grade of record. Faculty members may define other conditions for the removal of incomplete grades within the general framework indicated here.

Incomplete in graduate courses that are not cleared or repeated will remain on the transcript permanently as I (they will not revert to F).

**Changes of grade due to errors** in calculation or reporting may be initiated by an instructor at any time during one calendar year following the assignment of the original grade. A grade change may be initiated by the chairperson of the department that offered the course if, and only if, the instructor is not in residence. The approval of the graduate dean is needed to have the change of grade entered on the student's transcript.

This change of grade policy may not be applied after graduation to courses taken prior to graduation.

**Probation**

**Admission on Probation.** Students admitted on probation will automatically be moved off probation upon completion of their first 9 hours of graded graduate-level coursework at Wichita State University with a minimum 3.000 grade point average. If the student already had a graduate record at WSU, then the student's graduate GPA must also reach 3.000 before being removed from probation. Only courses numbered 500 and above which are letter graded (A, B, C, D, F) can be used toward the 9-hour requirement. S/U or Cr/NGr courses will not count toward the 9-hour requirement.

**Academic Probation.** Students admitted in good standing to a degree program, or non-degree category A, will be placed on academic probation if their graduate grade point average falls below 3.000. Students are automatically removed from probation once they achieve a graduate grade point average of 3.000 or higher.

Students admitted on probation or placed on academic probation are not eligible for assistantship awards or federally funded financial aid during the semesters in which they are on probation. Students on probation are not allowed to enroll in more than 12 credit hours during semesters in which they are on probation.

**Dismissal**

Students may be dismissed from their degree program or non-degree category A status if they fail to attain a grade point average of at least 3.000 upon the completion of 9 graduate credits after admission on probation, or fail to raise their graduate grade point average to a 3.000 following placement on academic probation, or at any time their graduate GPA drops below a 2.000. Students in this situation may be dismissed from the Graduate School, or may be dismissed from their program and placed into a nondegree category B status, upon the recommendation of the graduate coordinator of their program.

Students also may be dismissed from a graduate degree program if, in the opinion of the graduate faculty offering the program, they are unable to carry on advanced work or make satisfactory progress toward their degree. Students dismissed for this reason may be transferred to a nondegree category.

Following academic dismissal, students who wish to be considered for readmission to Graduate School must first complete a minimum of 9 hours of 500 level or above, letter-graded coursework, selected with appropriate advisement. These 9 hours cannot include a repeat of courses for which graduate credit was previously earned. Such coursework must be completed with a grade point average of 3.000 on a 4.000 scale or higher for the readmission application to be considered. Meeting this standard, along with both Graduate School and program-specific requirements, will permit consideration of readmission to a graduate program, but is not a guarantee of readmission. Previously dismissed students who are recommended for readmission under this policy will reenter on probation.

**Cooperative Education & Work-Based Learning Credit Courses**

Cooperative education is an academic program for undergraduate and graduate students who wish to combine classroom studies with academically related employment by being placed locally and nationally in paid work experiences closely related to their academic major.

Enrollment in cooperative education courses for graduate credit can be made only through those programs who have an approved course numbered 781 or 981 and are titled Cooperative Education. No other course titles such as independent study, special topics, and so forth can be used for cooperative education enrollment. Courses are graded Cr/NGr.

Graduate students in good academic standing desiring to participate in cooperative education classes should first consult with their program and the Graduate School. The Office of Cooperative Education & Work-Based Learning is located in 223 Grace Wilkie Hall. The telephone number is (316) 978-3688.

**Transfer of Credit from Another University**

Students may transfer, with departmental approval, graduate credit from an accredited graduate school under the following conditions:

1. (a) The credit-offering institution is accredited by the cognizant regional accrediting association to offer graduate degree programs appropriate to the level of credit to be transferred; (b) the credit is fully acceptable at the issuing institution in satisfaction of its advanced degree requirement; (c) the credit must be approved by the student's adviser as applicable in terms of content to the student's program of study at
WSU, and must carry a minimum grade value of 3.000 on a 4.000 point scale, with no course having a grade that generates fewer than 3.000 points on a 4.000 scale; (d) short courses must be at least three days in length/15 hours of instruction per credit; (e) taught by a faculty member of the institution, not a professional brought in to teach the course; (f) the course must be clearly marked as graduate level credit, with no other designation, such as: professional development, continuing education, etc.

2. Master’s and specialist degree programs requiring fewer than 40 hours may include no more than one-third of the total hours or 12 hours whichever is greater, of graduate work completed at another accredited graduate school (exclusive of hours in a previous master’s degree). Programs may require lower limits on transfer credit and therefore students should consult individual program descriptions. Doctoral, Master of Fine Arts (MFA), and other more lengthy programs have special transfer credit allowances, as indicated in their program descriptions.

3. Doctoral programs may include a maximum of one-third of the coursework hours required, exclusive of acceptable hours in a master’s degree.

4. An official transcript containing the requested transfer work must be on file in the Graduate School. If such work is shown on the transcripts provided in support of the original admission to

the Graduate School, no new record need be provided. Approval by the graduate degree program is necessary to ensure that the coursework has been accepted as an integral part of the candidate's program. Students assume responsibility for initiating the request for transfer of graduate credit as part of their degree plan.

5. Transfer credit that is accepted must have been in courses started six years or less before the semester in which the degree work is completed.

6. WSU courses repeated at another institution may be used to fulfill program requirements; however, the repeated course transferred from another institution will not be counted in the WSU grade point average.

Graduate credit work from another university will be posted on the WSU transcript only after it has been approved for transfer through the approved plan of study, and once the official transcript, sent directly from the transfer institution, has been received and accepted. Only the specific courses approved for transfer will be posted.

**Workshop, Extension, Correspondence Credit, and Credit by Exam**

Workshops and extension graduate credit courses may be accepted for graduate credit as a part of a graduate degree program under the following conditions:

1. The work is approved by the major department;
2. The work is approved by the dean of the Graduate School; and
3. The work is an integral part of a program planned by the candidate and the adviser and listed on an approved plan of study.

Graduate credit cannot be earned under a credit by examination program, and correspondence courses cannot be accepted for graduate credit.

**Exceptions to Regulations**

Departures from the rules and regulations stated in the Graduate Catalog require the filing and approval of a Request for Exception to Graduate School Regulations form. Such requests must have the approvals indicated on the form and must state in a logical and coherent manner a rational basis for the requested exception. Forms for such requests are available from the Graduate School and graduate program areas and may be downloaded from the Graduate School Web site. Unusual and/or substantial deviations from stated rules and regulations require action by the Graduate Council.
Degree and Certificate Completion

Commencement
WSU holds seven commencement ceremonies each year, one in December and six in May. All baccalaureate and master's degree candidates for the spring semester are eligible to participate in the May ceremony and all baccalaureate and master's degree candidates for the fall semester are eligible to participate in the December ceremony. Baccalaureate and master's degree candidates for the summer semester are eligible to participate in either the preceding May or following December ceremony.

Doctoral degree candidates are eligible to participate in the commencement ceremony held in the semester during which they complete their degree requirements (May or December). Doctoral candidates who complete their program during the summer semester are eligible to participate in the following December or following May ceremony.

More information may be found at the commencement Web site: wichita.edu/commencement.

Diplomas are available for distribution approximately seven weeks following the close of a given semester. Degree recipients may obtain their diplomas from the registrar’s office. Diplomas will be mailed from that office upon a written request that includes the name and student identification number of the degree recipient, the complete address where the diploma is to be mailed, the appropriate mailing fee ($5 inside USA; $25 outside USA), and a readable copy of the degree recipient's driver's license or other government issued photo ID.

Graduate Committees
Committee Structure
Committees for program completion exams are recommended by the major department and approved by the dean of the Graduate School. Graduate faculty holding acting ad hoc standing may not serve on thesis or dissertation committees except in special circumstances approved by the graduate dean.

In master’s programs, final oral defense examinations are required of all students presenting theses or research projects. A thesis committee is composed of a minimum of three and a maximum of five graduate faculty, including the chairperson who must be a full graduate faculty member. At least one committee member, the graduate dean’s representative, must be from an academic department outside the major department. A majority of the committee members must be from the major department. No more than one committee member may have graduate faculty standing as a graduate faculty affiliate or a practicing professional.

In doctoral programs, final oral defense examinations are required for all students presenting dissertations. The supervisory (dissertation) committee is composed of a minimum of five graduate faculty, with at least four having full membership, including the chairperson who must have authorization to chair doctoral committees. At least one committee member, the graduate dean’s representative, must be from an academic department outside the major department. A majority of the committee members must be from the major department. No more than one committee member may have graduate faculty standing as a graduate faculty affiliate or a practicing professional. In addition to guiding the student to successful completion of the dissertation, this committee conducts the final oral defense examination.

Once the supervisory committee has approved the dissertation proposal (via the proposal form submitted to the Graduate School), changes do not normally occur in the committee structure. If committee membership needs to be altered after proposal approval, the committee chair requests such a change via memo to the graduate dean indicating the membership change and the rationale for such a change.

In general, once a major adviser (thesis or dissertation committee chair) has been identified for the student (via plan of study or other document sent to the Graduate School), that adviser stays in place for the duration of the thesis or dissertation. Thesis and dissertation students considering a change in their major adviser should consult departmental guidelines for doing so. Doctoral students changing major advisers would likely need to submit a new proposal.

The oral defense of the thesis or dissertation is scheduled (via the Request to Schedule Oral Defense form submitted to the Graduate School) when the committee chair makes the determination that the student is ready to defend. The Request to Schedule Oral Defense form should be submitted to the Graduate School two weeks prior to the requested defense date. The defense must be held on or before the published deadline for the semester of graduation.

The defense examination is a public oral examination normally lasting about two hours, at which the candidate presents and defends the dissertation or thesis. The examination is chaired by the student’s major adviser. All members of the examining committee (or substitutes appointed by the dean of the Graduate School) are expected to be present throughout the examination. One negative vote from a committee member (not the committee chair) on the examining committee (including substitutes) may occur, and the candidate would still be considered as having passed the examination. A failed oral defense may be retaken based on departmental guidelines. The thesis or dissertation manuscript must be delivered by the student to the committee members at least two weeks before the date of the oral defense.

Committee’s Role
Responsibilities of the Thesis/Dissertation Committee
Graduate faculty members are called upon to serve on student committees such as those constituted for master’s theses, master’s and doctoral oral examinations, and doctoral dissertations. The degree of committee involvement in the planning of the student’s work varies from program to program. However, at the very least, committee members in oral examinations, thesis defenses, and dissertation defenses are expected to have given a thorough and thoughtful reading to all materials. They will have prepared questions to test the student’s knowledge, originality and independence of thought so that the faculty member will be able to ascertain the student’s success in meeting standards expected for graduate level performance. Of course, graduate faculty members are expected to exercise independent critical judgment in evaluating students, to use fair and reasonable standards for the level of graduate work being evaluated and to refrain from introducing personal bias.

In general, the committee ensures that students are completing quality research specifically in terms of defining the research question, appropriateness of the research methods, and accuracy of the conclusions drawn from the research (via approval of the research proposal and approval of the student’s readiness to defend the completed research). In addition, the committee ensures that the presentation of the document conforms to the writing standards expected for scholarly documents in the
discipline (via final copy approval on the Recommendation for Degree form).

**Responsibilities of the Committee Chair**

Supervision (chairing) of graduate students’ research takes many forms—guiding the development of research proposals, helping plan master's theses or doctoral dissertations, and determining students’ readiness to take written and oral examinations. Although the traditions of different disciplines vary in the closeness of working relationships between graduate students and advisers during thesis, dissertation and exam preparation, advisers are expected to maintain active knowledge about students’ plans, work and progress, to read drafts of written work, to give prompt feedback, and to help students shape their work until it meets the standard of quality expected in the field. These qualitative standards range from details of form to more general standards of originality and integrity. The degree to which the chair involves other committee members in the initial stages of the student's research varies across the disciplines. However, at the very least, the research proposal should be approved by the entire committee, and the proposal should contain sufficient substance and detail to determine the quality of the research being proposed.

The committee chair is specifically charged with the following duties:

1. Informing the student of applicable Graduate School regulations;
2. Approving, in consultation with other committee members, the research proposal;
3. Approving, in consultation with the student, who will serve on the committee;
4. Assisting the student in preparation of the thesis/dissertation document in a format consistent with that expected of a scholarly document in the discipline;
5. Determining, in consultation with other committee members, that the student is ready to defend the thesis or dissertation. Assuring that the student provides the manuscript to the committee members at least two weeks in advance of the oral examination date;
6. Filing the student’s request to schedule the oral defense with the Graduate School. The defense examination is a public oral examination normally lasting about two hours, at which the candidate presents and defends the dissertation or thesis. It is generally the student’s responsibility to contact committee members and determine a date and time for the oral defense;
7. Assisting the student in announcing the oral defense date and time to the university community;
8. Chairing the oral defense; and
9. Handling the completion of the form: Recommendation for Degree. This form allows committee members and committee chair to sign off on two substantive items:
   a. Student’s performance during the oral defense (pass/fail), and
   b. Readiness of the document (thesis or dissertation) for final copy. In this step, committee members ensure that changes in the thesis or dissertation document, requested during the oral exam, are included in the document by the student. Requested changes may pertain to:
      i. Content issues, and/or
      ii. Formatting/grammatical corrections needed.

Committee members who also wish to see those changes in the document may request to review the document again before the final copy is produced.

In the case of terminal projects (versus theses and dissertations), departmental documentation should clarify the responsibilities of the project chair and committee.

**Responsibilities of the Outside Committee Member**

Although the outside member’s area of expertise may not directly pertain to the defense topic, his or her role is very important. As an outside member, the primary responsibility is one of oversight on behalf of the Graduate School assuring that the thesis or dissertation meets the standards of graduate scholarship, that committee members and the student abide by Graduate School regulations, and that the committee treats the student appropriately during the oral defense (e.g., asking questions only germane to the topic, treating the student professionally). Therefore the outside member evaluates the candidate’s performance and casts a vote just as other committee members do. In addition, the outside member completes a formal evaluation of the oral defense process by completing an Oral Defense Evaluation form on which the following elements are evaluated:

1. The final exam was conducted in an orderly manner;
2. The oral examination process was fair and reasonable; and
3. The quality of the student's work was consistent with institution-wide expectations and standards.

The completed evaluation form is returned to the Graduate School within three weeks after the oral defense.

**Credits Required**

All master's degrees require a minimum of 30 credit hours of graduate credit work, including 18 hours in courses numbered 700 and above. Some programs require more than 30 credit hours, in which case at least 60 percent of the courses must be numbered in the 700 level or above. Workshops and transfer hours may not be used to fulfill the 700-level requirement.

The total number of hours for the doctoral degree varies with the major department offering the program, including the division between coursework and dissertation hours. At least 60 percent of the hours beyond the master's degree must be in courses numbered 800 and above. Specific program requirements are listed in the individual program's section of the *Graduate Catalog*.

**Concentrations in Graduate Programs**

Concentrations, consisting of 9–12 credit hours, are offered within existing degree programs where the 9–12 credit hours constitute a coherent academic topic or theme. The concentration may include required and/or elective courses as long as the listing of elective courses (from which the concentration courses are selected) forms a coherent academic topic or theme.

The Graduate Council and the graduate dean must approve concentrations. Once approved, the program area may 1) use the word “concentration” in their publications and 2) may have the concentration identified on the student's transcripts and diplomas (for example, Master of Accountancy/Taxation).

The graduate plan of study, filed with the Graduate School, must specify the name of the concentration and the courses to be taken as concentration courses.

**Certificates in Graduate Programs**

Students completing the requirements for a graduate certificate must submit the Graduate Plan of Study form and the Application for Graduate Certificate form no later than the 20th day of the fall or spring semester or the 10th day of the eight-week summer term when certificate completion is anticipated.

The graduate plan of study is prepared in conjunction with the adviser of the graduate certificate program area and is forwarded to the dean of the Graduate School. Transfer hours and
substitutions are usually not acceptable for certificate programs. Graduate programs offering graduate certificates should have a process for knowing who is completing certificate work. Certificate advisers are expected to inform students that a plan of study, application for graduate certificate form, and $15 certificate filing fee is required according to the above guidelines. Students filing to earn their certificate who also file to earn their graduate degree the same term need to file both the application for graduate certificate and the application for degree, and if they file both at the same time, need to only pay one $15 filing fee. Students who file the forms separately pay the fee for each form.

If, after a student files an application for graduate certificate, the certificate is not completed, a new application for graduate certificate and filing fee must be filed within the time frame previously described for the semester in which the requirements for the certificate are again expected to be completed.

Degree Application

An Application for Degree form (AFD) and $15 filing fee must be filed with the Graduate School within four weeks (20 class days) after the beginning of any fall or spring semester in which a student plans to finish all requirements for the degree.

Students planning to graduate at the end of the summer session must file an application for degree form within two weeks (10 class days) after the beginning of the regular eight-week session even if they plan to enroll for the second four-week session only. In the latter case, the AFD must be filed by the second week with an indication of intent to enroll for the second four weeks.

If, after a student files an AFD, the degree is not completed, a new AFD and filing fee must be filed within the time frame just described for the semester in which requirements for the degree are again expected to be completed.

Failure to meet these deadlines will result in a delay in graduation and in the awarding of the diploma.

Examinations

Preliminary examinations are administered by several programs to determine students’ qualifications for further graduate study. Qualifying and/or comprehensive examinations are required in all doctoral programs. The candidate passes if no more than one negative vote is cast in a five-member committee, and the negative vote does not come from the committee chair.

Most master’s programs also require written or oral comprehensive examinations. The candidate passes if no more than one negative vote is cast in a three-member committee, and the negative vote does not come from the committee chair.

Candidates should refer to the appropriate program’s section of the Catalog or consult with the program for additional information about exams.

Plan of Study

In order to officially define a program of study for a graduate degree, students must submit the Graduate Plan of Study form leading to admission to candidacy. Submission of the proposed plan of study requires that the conditions of admission (if any) to the program area have been completed. The proposed plan identifying the completion option should be submitted after the completion of 12 hours, and must be on file in the Graduate School office no later than the 20th day of the fall or spring semester, or the 10th day of the eight-week summer term, during the semester of graduation. Some programs may have earlier deadlines for submitting the plan of study.

Students must meet the program requirements in effect at the time the plan of study is officially approved by the Graduate School. It is recommended, therefore, that the plan of study be submitted as soon as possible for master’s students and by the end of the semester of completion of qualifying examinations for doctoral students.

The plan of study is developed in conjunction with the adviser and signed by the candidate, the adviser (and advisory committee members, if applicable), the chairperson of the major department, and the dean of the Graduate School. All academic work completed and planned for the degree must be included in the plan of study at the time of submission.

The process of filing an acceptable plan of study is not completed until the student has received a copy of their detail requirements from the Graduate School. If the detail requirements sheet has not been received approximately three weeks following submission of the proposed plan, students should check with the Graduate School office.

Excess hours beyond the program requirements are not permitted on a graduate plan of study. A variation of one or two hours can occur due to slight variations in course offerings, but a graduate plan of study may not exceed the program requirements by any significant amount.

Students may make changes to the plan of study that are necessary because of enrollment problems or other circumstances by submitting the plan of study form and showing only the necessary revisions. More extensive changes may be accomplished by filing a new plan of study marked “revised plan.”

Failure to meet the deadline for filing an acceptable plan of study may result in a delay in graduation or loss of credit planned for use in the program.

Progress

Degree-seeking graduate students and students completing graduate certificate programs are expected to make satisfactory progress toward their degree or certificate in a timely manner (six-year time limit for master’s and specialist degrees; six to nine years for doctoral degrees). Some departments take action to dismiss students who absent themselves for periods of a year or more.

Students who complete graduate degrees at Wichita State University are transferred to non-degree, category A, status in the academic field of their graduate degree which allows continued enrollment for graduate credit at WSU. Should such students desire to undertake a new academic program or change advising areas, a new application for admission to the desired area of study and application fee must be filed with the Graduate School office.

Residency Requirement

Doctoral students are required to spend at least two continuous semesters (summer excluded) as full-time students.

Time Limits

Students have six years in which to complete a master’s degree program starting from the first semester the student begins the coursework that is designated in the plan of study.

For doctoral programs requiring a master’s degree for admission, the doctorate must be completed within six years from the effective semester of admission. In those programs permitting admission directly after the bachelor’s degree, the doctorate must be completed within nine years from the effective semester of admission.

In cases where the above time limits are exceeded and in which the student desires to have a course count toward degree completion, the outdated course must be validated or substituted with a course within the time limits, or an Application for Exception to Graduate Regulations must be filed and approved to waive the time limits for the course in question. To have courses validated, students seek approval from
their department, and must submit a Course Validation Request form to the Graduate School for validation approval. The instructor must identify on the form the process that will be used to certify that the student has achieved a grade value of 3.000 on a 4.000 point scale. Grades lower than a B (generating less than 3.000 grade points), will not be accepted.

Transfer courses and work that originally received a grade lower than a B (generating less than 3.000 grade points), cannot be validated. Courses completed ten or more years before the degree is granted, even if previously validated, may not be used to meet degree requirements.

**Thesis or Research Credit**

When a thesis is part of a student's master's degree program, and for all doctoral students, thesis or dissertation or research project credit must show on their graduate transcript. The transcript will normally carry the grade of I (incomplete) until the thesis or dissertation is completed and the student has met the requirements of the supervisory committee and the Graduate School. An S (satisfactory) or grade of B or better is required for an acceptable thesis/dissertation. Thesis or dissertation hours in excess of the minimum required for the degree will be graded S.

Students writing a thesis or dissertation or engaged in research must be enrolled in courses entitled Thesis, Dissertation, or Research each semester in which they receive advice, counseling, or research direction from their advisers. This includes the semester of graduation. Enrollment is for the number of hours that accurately reflects the demands of the student on university faculty and facilities.

Students engaged in terminal activities other than thesis, dissertation, or research (e.g., internship, practicum, portfolio, directed project) must be enrolled in courses carrying these titles each semester in which they receive advice, counseling, or direction from their advisers. This includes the semester of graduation. Such hours in excess of the minimum required for the degree will be graded S. Enrollment is for the number of hours that accurately reflect the demands of the student on university faculty and facilities. The minimum enrollment for doctoral students is 2 credit hours of the terminal activity.

**Thesis/Dissertation Preparation**

Since fall 2006, all students have been required to submit their theses or dissertations through an electronic process called ETD (Electronic Theses and Dissertations). The ETD is similar to its paper predecessor; however, rather than printing a hard copy for submission to the Graduate School, the thesis/dissertation is converted to a Portable Document Format (PDF) file for electronic submission to the Graduate School. No bound copies will be required from the student if the thesis/dissertation is submitted by ETD. All students will be required to make an appointment with the degree audit specialist in the Graduate School for a format check of the paper copy. The PDF will be uploaded to the Blackboard Learning System using the digital drop box once approval has been given by the Graduate School. A copy will be saved on a CD by the Graduate School and given to the student, the chair of the committee, and the student’s major department. The final copy of the ETD will be sent to the university library. The student’s ETD will contribute to worldwide graduate education as we build a Networked Digital Library of Theses and Dissertations (NDLTD) in collaboration with other scholarly institutions.

For additional information about the preparation of the thesis or dissertation, the student is referred to the Graduate School publication, Guide to the Preparation of Theses and Dissertations, which can be purchased in the WSU Bookstore.

**Tool or Language Requirements**

The Graduate School has no overall tool or language requirements, although such requirements have been established by some programs. Students should consult an individual program’s section of the Graduate Catalog for information regarding such requirements.

Any tool subjects (e.g., foreign language, computer programming, statistics) required by the major program must be identified in the student’s plan of study. The completion of this tool is not required prior to submission of the plan of study but is required prior to graduation.

**Transfer of Credit from Another University**

Students may transfer, with departmental approval, graduate credit from an accredited graduate school under the following conditions:

1. The credit-offering institution is accredited by the cognizant regional accrediting association to offer graduate degree programs appropriate to the level of credit to be transferred; (b) the credit is fully acceptable at the issuing institution in satisfaction of its advanced degree requirement; (c) the credit must be approved by the student’s adviser as applicable in terms of content to the student’s program of study at WSU, and must carry a minimum grade value of 3.000 on a 4.000 point scale, with no course having a grade that generates fewer than 3.000 points on a 4.000 scale; (d) short courses must be at least three days in length/15 hours of instruction per credit; (e) taught by a faculty member of the institution, not a professional brought in to teach the course; (f) the course must be clearly marked as graduate level credit, with no other designation, such as: professional development, continuing education, etc.

2. Master’s and specialist degree programs requiring fewer than 40 hours may include no more than one-third of the total hours or 12 hours whichever is greater, of graduate work completed at another accredited graduate school (exclusive of hours in a previous master’s degree). Some programs may require lower limits on transfer credit and therefore students should consult individual program descriptions. Doctoral, Master of Fine Arts (MFA), and other more lengthy programs have special transfer credit allowances, as indicated in their program descriptions.

3. Doctoral programs may include a maximum of one-third of the coursework hours required, exclusive of acceptable hours in a master’s degree.

4. An official transcript containing the requested transfer work must be on file in the Graduate School. If such work is shown on the transcripts provided in support of the original admission to the Graduate School, no new record need be provided. Approval by the graduate degree program is necessary to ensure that the coursework has been accepted as an integral part of the candidate’s program. Students assume responsibility for initiating the request for transfer of graduate credit as part of their degree plan.

5. Transfer credit that is accepted must have been in courses started six years or less before the semester in which the degree work is completed.

6. WSU courses repeated at another institution may be used to fulfill program requirements; however, the repeated course transferred from another institution will not be counted in the WSU grade point average.

Graduate credit work from another university will be posted on the WSU transcript only after it has been approved for transfer through the approved plan of study, and once the official transcript, sent directly from the transfer institution, has been received and accepted. Only the specific courses approved for transfer will be posted.
Degree Program Regulations

1. To pursue a graduate degree at Wichita State, students must be admitted to the specific program for which they are seeking a degree. Students may not be admitted to more than one graduate program at a time. Submission of a second application will result in the cancellation of the first.

2. To remain in good standing in a graduate degree program, students must maintain a grade point average of at least 3.000 in all courses on the student’s WSU plan of study (excluding transfer work) and for all graduate work taken at WSU. Grades lower than C, including C-, cannot be used to satisfy degree requirements, but such grades earned, beginning fall 2001, may be repeated.

   Demonstrated suitability for professional practice, as determined by faculty, is also a consideration for remaining in good standing in graduate programs leading to advanced certificates or other endorsements indicating advanced professional practice or achievement.

3. Upon the advice and consent of the major department, a maximum of 6 credit hours of work in one earned master's degree program may be applied to a second master's degree. Such hours must meet the time limit requirement.

4. No more than 6 hours of independent study coursework (excluding dissertation, thesis, and other independent study activities that are terminal requirements for a degree) can be used in a degree program.

5. No more than 6 hours of work graded S or Cr may be used toward the requirements of a graduate degree (excluding dissertation, thesis, and other independent study activities that are terminal degree requirements). Refer to individual program areas as they may differ regarding this 6-hour limit.

6. Master’s and specialist degree programs requiring fewer than 40 hours may include no more than one-third of the total hours or 12 hours whichever is greater of graduate work completed at another institution accredited to offer graduate degree programs (exclusive of hours in a previous master’s degree). Departments may require lower limits on transfer credit and, therefore, students should consult individual program descriptions. Doctoral, Master of Fine Arts (MFA), and other more lengthy programs have special transfer credit allowances, as indicated in their program descriptions.

7. Transfer credit that is accepted must have been in courses started six years or less before the semester in which the degree work is completed.

8. Enrollment in Final Semester. Graduate students must be enrolled in appropriate graduate-level coursework during the semester of graduation. Such enrollment recognizes the use of university resources, including faculty and staff, as part of degree completion. The minimum enrollment for thesis students is 1 hour of thesis. The minimum enrollment for doctoral students is 2 hours of dissertation.

9. Doctoral students are required to spend at least two continuous semesters (summer excluded) as full-time students.

10. Faculty members of Wichita State University who hold the rank of assistant professor or higher cannot earn graduate degrees from Wichita State except for unassigned faculty (not attached to a particular college) or faculty members granted specific approval by the Graduate Council. Full-time faculty members may not pursue more than 6 hours of graduate credit per semester.

Exceptions to Regulations

Departures from the rules and regulations stated in the Graduate Catalog require the filing and approval of an Application for Exception to Graduate School Regulations form. Such requests must have the approvals indicated on the form and must state in a logical and coherent manner a rational basis for the requested exception. Forms for such requests are available from the Graduate School and graduate program areas and may be downloaded from the Graduate School Web site. Unusual and/or substantial deviations from stated rules and regulations require action by the Graduate Council.
Financial Opportunities

Students wishing to be considered for assistantships, fellowships, scholarships, or other forms of financial awards should indicate their interest to their graduate coordinator or program chair as soon as possible after notification of admission.

Students admitted on probation or placed on academic probation following admission are not eligible for assistantship, fellowship awards, or federally-funded financial aid.

**Assistantships**

Each year Wichita State University awards a number of assistantships for advanced study. Grants are made in most departments offering advanced degrees. Assistantships are awarded primarily on the basis of a student’s academic record and demonstrated teaching, research, and leadership abilities, together with any other available supporting evidence.

Students must be admitted to a degree program in either full-standing or conditional status. Students admitted on probation or placed on academic probation following admission are not eligible for assistantship awards. Undergraduate students admitted under the senior rule option, or in accelerated bachelor’s to master’s programs are not normally considered for assistantship awards.

Recipients of a full-time graduate assistantship may not hold appointments totaling more than 20 hours per week and may not hold other WSU remunerative employment without the written approval of the department chairperson and dean of the Graduate School.

A graduate teaching assistantship may qualify the recipient for up to a 100 percent waiver of tuition. Graduate students must provide service from the 20th day of the semester through the remainder of the semester to be eligible for the non-resident to resident tuition waiver. Only courses numbered 500 and above are eligible for full or partial waiver of tuition for graduate teaching assistants. Potential applicants for graduate teaching assistantships who are non-native speakers of English must first attain a score of 50 or above on the Test of Spoken English (TSE)/SPEAK, or a score of 23 or above on the speaking portion of the Internet Based TOEFL (IBT). The department chairperson or graduate coordinator should be contacted for further information. The actual dollar amount of an assistantship varies according to the length of the appointment, the number of hours worked per week, and the funding base within each department. At Wichita State University, assistantships for 20 hours of work per week for a nine-month period range from $5,800 to $24,000. This average is provided for information purposes. Assistantship appointments are made on a semester basis.

Graduate students holding assistantships during a fall or spring semester are expected to enroll in at least 9 credit hours of coursework, of which 6 hours must be at the graduate level. Exceptions to allow graduate assistants who hold a 20-hour appointment to be enrolled in 6–8 hours may be approved by the program where the student holds admission. Special consideration for thesis and research enrollments may be obtained by petitioning the Graduate School through the exceptions process.

As a part of the hiring process at WSU, all graduate assistants are required to submit to a criminal background check before employment commences.

**Fellowships**

Fellowships are awarded to a limited number of graduate students in good academic standing who are admitted to a program of study leading to a doctoral degree and to certain programs at the master’s level. Awards are made primarily on the basis of the academic achievement and potential of the student as a degree candidate. Credentials including transcripts of all previous academic work, scores on national or local exams, experience related to the field of study, and evaluations by former teachers, advisers, or employers are used in determining the awards. Selections are made on a competitive basis without regard to race, creed, sex, or national origin and are generally announced by April 15 for the following fall. Award amounts are determined by the individual program area.

Students desiring a listing of programs offering graduate assistantships, fellowships, and scholarships are referred to the graduate school Web site or the program area of their interest.

**General Awards**

The Graduate School oversees and distributes general awards and certain fellowship activities as described below. Information can be found on the Graduate School Web site. Inquiries about these awards and additional eligibility requirements should be made to:

- Graduate School
- 107 Jardine Hall
- Wichita State University

**Outstanding Graduate Student Awards**

Funding for the Graduate School Outstanding Graduate Student awards is made possible by the Graduate School and through generous donations to the WSU Foundation from the Dora Wallace Hodgson Estate. Awards are given annually for the following categories: Graduate School Outstanding Doctoral Dissertation, Graduate School Outstanding Master’s Thesis, Dora Wallace Hodgson Outstanding Doctoral Student, and Dora Wallace Hodgson Outstanding Master’s Student. Students nominated for any of these awards must meet general eligibility requirements including good standing in a degree bound program, nomination by a faculty member, and approval by the graduate coordinator or department chair, and the dean of their college. Please contact the Graduate School or visit the Graduate School Web site for nomination deadlines.

**Michael P. Tilford Graduate Fellowship**

The Michael P. Tilford Graduate Fellowship, established in memory of former WSU Graduate School Dean Michael P. Tilford, is awarded to a currently enrolled full-time graduate student in good academic standing in any graduate degree program. Preference is for a minority student who is a U.S. citizen. Financial need is also considered. Eligible students may apply by submitting a letter of application, and one letter of support from a faculty member. Please contact the Graduate School or visit the Graduate School Web site for application deadlines.

**Dr. Laiten L. and Verna Nye Camien Fellowship**

The Dr. Laiten L. and Verna Nye Camien Fellowship is awarded to a fully-admitted graduate student in good academic standing in a graduate degree program in social sciences, foreign language, or education. Eligible students may apply by submitting a letter of application, and one letter of support from a faculty member. Please contact the Graduate School or visit the Graduate School Web site for application deadlines.
E.L. Cord Foundation Graduate Fellowship
The E.L. Cord Foundation Graduate Fellowship is awarded to a fully-admitted graduate student in good academic standing, with demonstrated financial need. Applicants for this award can be enrolled either full time or part time. Eligible students may apply by submitting a letter of application detailing how their eligibility requirements are met, how the award will be used to further their educational goals, what those goals are, number of credit hours enrolled in the current semester and planned for future semesters, and finally, their financial situation. Along with this letter, applicants must submit a letter of support from a faculty member. Please contact the Graduate School or visit the Graduate School Web site for application deadlines.

WSU Foundation and City of Wichita Assistantships
In addition to the regular teaching and research awards, a number of graduate assistantships are provided by the Wichita State University Foundation and from the City of Wichita and Sedgwick County mill levy funds. These awards require full-time study or a combination of research assistance and study equivalent to full-time study. The awards are made in graduate program areas judged to have a special need for graduate student support and are based primarily upon a student’s academic record, experience, and other available supporting evidence. All such awards are made by the graduate dean upon recommendation of the selected departmental chairpersons and may include programs at both the master’s and doctoral program level.

Educational Opportunity Fund
Funds are provided by the Student Government Association from student fees for new and continuing part-time students with financial need. Tuition awards are made contingent on annual funding to full-standing degree-bound students who are enrolled in at least 3 hours but not more than 8 hours, and who qualify for financial assistance. Please contact the Graduate School or visit the Graduate School Web site for application deadlines. A financial statement form is part of the application.

Ollie A. & J.O. Heskett Graduate Fellowships
The Ollie A. & J.O. Heskett Graduate Fellowship award is made possible by a generous donation to the Wichita State University Foundation from the H. Dene Heskett estate. It is awarded to a degree-bound graduate student in good academic standing, enrolled in at least 6 graduate credit hours, in any academic program area, who exhibits significant achievements and qualifications, and strong extracurricular activities in support of the professional community at department, college, and/or Wichita State University level. To be considered, students must be nominated by a faculty member. Excellence in final projects, such as thesis, paper, performance, portfolio, demonstration, etc., are factors to be considered by nominating faculty. Along with the nomination coversheet (bearing all required signatures), the nominator should submit an evaluative statement, and the nominee’s current curriculum vitae. Supporting materials may also be included, such as letters of support, awards, thesis. Publications should not be included. Please contact the Graduate School or visit the Graduate School Web site for application deadlines.

Donald D. Sbarra Endowed Fellowship
The Donald D. Sbarra Endowed Fellowship is awarded to a degree-seeking graduate student, in good academic standing, with demonstrated financial need. Applicants for this award must be enrolled full time in a graduate degree program, be in good academic standing, with a graduate GPA of at least 3.200, and must demonstrate financial need. In order to apply, the following items must be submitted: 1) An application letter addressing how eligibility requirements are met; how the award will be used to further the applicant’s education; educational goals; credit hours enrolled during current and next semesters; applicant’s financial situation; 2) One letter of support from a faculty member. Please contact the Graduate School or visit the Graduate School Web site for nomination deadlines.

Research Fellowships
Delano Maggard, Jr., Graduate Research Grant
The Maggard research grant supports graduate students in their pursuit of independent research and investigation in their field of major interest. Funds are provided through the WSU Foundation, Delano Maggard, Jr. endowed account.

Applicants must be in full-standing status in a degree program. Applicants must be enrolled in the semester prior to the semester of award and show satisfactory academic progress in coursework related to the proposed course of study. Please contact the Graduate School or visit the Graduate School Web site for application deadlines.

Special Research Fellowships
Special research scholarships encourage research among graduate students and recognize their superior achievement by providing financial support to students who present the results of their scholarly research at professional meetings and conferences.

Applicants must be in good academic standing, have a comprehensive plan of study on file with the Graduate School, and submit documentation that the presentation has been accepted for presentation at a professional meeting. One award per student within a 12-month period may be considered. The application deadline is ongoing, but the application must be received in the Graduate School office four weeks prior to the presentation.

Dora Wallace Hodgson Summer Research Award
The Dora Wallace Hodgson Summer Research Award provides one-time summer support for master’s and doctoral candidates enrolled in at least one hour of research courses. A letter of support must be submitted from the faculty adviser with awards made upon availability of funds. Programs will be notified of fund availability on an annual basis. Please contact the Graduate School or visit the Graduate School Web site for application deadlines.

Need-Based Financial Aid
WSU’s Office of Financial Aid helps graduate students secure federal and state financial aid on the basis of need. Need is the difference between the cost of education—which includes tuition, fees, room, board, books, supplies, and other expenses—and the amount the students and their families can afford to pay.

The amount the student and his or her family can pay is the expected family contribution. The expected family contribution is determined by evaluating the information provided on the financial aid application submitted to the government. The federal processing agency considers income, assets, family size, and the number in family attending college to determine the need for aid.

The first step in applying for these programs or loans is to complete a financial assessment form and to request the results be sent to the Wichita State University Office of Financial Aid. If need-based financial aid is required, the Graduate School strongly recommends that the completed application for admission to Graduate School is received in the Graduate School by February 1 for the following fall semester. Graduate students admitted on probation or placed...
on academic probation following admission are not eligible for need-based financial aid. Students admitted with conditions are also not eligible for need-based financial aid.

Students must be enrolled in at least half-time status to qualify for federal aid. Half-time status is defined as 5 credit hours for the fall or spring semesters, and 3 credit hours for the summer session.

**Application Deadlines**

To ensure federal aid is processed before the end of the semester, please adhere to the schedule below. Financial aid applications and all required documents must be in the Office of Financial Aid by the following dates:

<table>
<thead>
<tr>
<th>Enrollment Period</th>
<th>Due Date</th>
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<tbody>
<tr>
<td>Spring</td>
<td>November 1</td>
</tr>
<tr>
<td>Summer</td>
<td>April 1</td>
</tr>
<tr>
<td>Fall</td>
<td>March 1</td>
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**Work Opportunities**

Many graduate students participate in the university’s Cooperative Education and Work-Based Learning Program. In this program, students work at the local, state, or national level in well-paying jobs that complement their academic field of study. Students earn academic credit while learning degree-related skills and earn money to support their graduate studies. Students must have departmental permission to participate.

**Exceptions to Regulations**

Departures from the rules and regulations stated in the *Graduate Catalog* require the filing and approval of an Application for Exception to Graduate School Regulations form. Such requests must have the approvals indicated on the form and must state in a logical and coherent manner a rational basis for the requested exception. Forms for such requests are available from the Graduate School and graduate program areas and may be downloaded from the Graduate School Web site. Unusual and/or substantial deviations from stated rules and regulations require action by the Graduate Council.
General University Information

2010-2011 University and Academic Officers

Donald L. Beegs, president
Gary L. Miller, provost and vice president for academic affairs and research
Ted D. Ayres, vice president and general counsel
Mary L. Herrin, vice president for administration and finance
Wade Robinson, vice president for campus life and university relations
Eric Sexton, director of Intercollegiate Athletic Association, Inc.
Andrew Schlapp, director, government relations
J. David McDonald, associate provost for research and dean of the Graduate School
Douglas Hensler, dean of the W. Frank Barton School of Business
Sharon H. Iorio, dean of the College of Education
Zulma Toro-Ramos, dean of the College of Engineering
Rodney E. Miller, dean of the College of Fine Arts
Peter A. Cohen, dean of the College of Health Professions
William Bischoff, dean of the Fairmount College of Liberal Arts and Sciences
Ravi Pendse, interim dean of university libraries
Cheryl M. Adams, dean of students
Christine Schneikart-Luebbe, dean of enrollment services

Kansas Board of Regents
Andy Tompkins, president and CEO (June 2010)
Board Members:
Jerry Boettcher, Beloit
Jill Docking, Wichita, chair
Christine Downey-Schmidt, Inman
Richard “Dick” Hedges, Fort Scott
Dan Lykins, Topeka
Janie Perkins, Garden City
Donna Shank, Liberal
Gary Sherrer, Otsland Park, vice chair

Mission Statement
In 1991, the Kansas Board of Regents approved the following mission statement for Wichita State University:

Wichita State University is committed to providing comprehensive educational opportunities in an urban setting. Through teaching, scholarship, and public service, the university seeks to equip both students and the larger community with the educational and cultural tools they need to thrive in a complex world, and to achieve both individual responsibility in their own lives and effective citizenship in the local, national, and global community.

High quality teaching and learning are fundamental goals in all undergraduate, graduate, and continuing education programs. Building on a strong tradition in the arts and sciences, the university offers programs in business, education, engineering, fine arts, and health professions, as well as in the liberal arts and sciences. Wichita State has 113 degree programs that range from the associate to the doctoral level; non-degree programs are designed to meet the specialized educational and training needs of individuals and organizations in south central Kansas.

Scholarship, including research, creative activity, and artistic performance, is designed to advance the university's goals of providing high quality instruction, making original contributions to knowledge and human understanding, and serving as an agent of community service. This activity is a basic expectation of all faculty members at Wichita State University.

Public and community service activities seek to foster the cultural, economic, and social development of a diverse urban community and of the state of Kansas. The university's service constituency includes artistic and cultural agencies, business and industry, and community educational, governmental, health, and labor organizations.

Wichita State University pursues its mission using the human diversity of Wichita, the state’s largest urban community, and its many cultural, economic, and social resources. The university faculty and professional staff are committed to the highest ideals of teaching, scholarship, and public service, as the university strives to be a comprehensive, urban university of national stature.

Wichita State University Profile
Wichita State University, as one of the six universities governed by the Kansas Board of Regents, is Kansas’ only urban-serving research university.

WSU’s location in the largest city in Kansas enhances the traditional classroom experience by providing students greater opportunities in resources, contacts with business and government leaders, employment and internships. WSU is also a local resource for businesses, industry, nonprofits and local government.

Both traditional and nontraditional students enjoy a wide selection of day, evening and summer courses in more than 200 areas of study at the main, West, and South Campuses. Of the almost 15,000 students, 87 percent are from Kansas, representing 101 counties in the state, and the remainder are from almost every state in the U.S. and 111 foreign countries. The average age of entering freshmen at Wichita State is 19; the average age of all undergraduate students is 24.

Nearly 64 percent of the students attend full time, while the remainder attend part time and take advantage of gaining work experience at local companies such as Boeing, Hawker Beechcraft, Cessna Aircraft, Coleman, Bank of America, Bombardier Aerospace-Learjet, Via Christi Regional Medical Center, Wesley Medical Center and Koch Industries. Many students also take advantage of WSU’s work-based learning program, which has partnerships with 500 top organizations in the United States.

Wichita State, which is classified by the Carnegie Foundation as a doctoral granting, high research institution, offers 60 undergraduate degrees in more than 200 areas of study in six undergraduate colleges: W. Frank Barton School of Business, College of Education, College of Engineering, College of Fine Arts, College of Health Professions, and the Fairmount College of Liberal Arts and Sciences. It also offers an associates degree and 12 certificate programs. The Graduate School offers an extensive program including 42 master’s degrees, a specialist in education degree, 12 doctoral degrees, and 28 certificate programs. WSU is accredited by the North Central Association of Colleges and Schools and 22 program-specific accrediting agencies. A listing of WSU graduate programs and degrees is located on pages 4-5 of the Catalog.

Wichita State has 456 full-time faculty and 49 part-time faculty, with 10 percent of the faculty having earned the highest degree in their field.

Although WSU’s first commitment is to excellence in instruction, it has an equally strong commitment to excellence in research and public service as integral parts of its educational mission. The National Institute for Aviation Research consistently receives funding from such agencies as the FAA and NASA to continue important research in such areas as composites and aging aircraft. According to the National Science Foundation, WSU is one of the top
Approximately 18 national sororities and fraternities are active on campus.

The 330-acre campus is modern and accessible and at the same time retains the flavor of the university’s heritage, combining distinctive Georgian-style architecture with more modern buildings of stone and brick that are accentuated by attractive landscaping. During the past 25 years, Wichita State has more than doubled its instructional space, adding major buildings for art, engineering, health sciences, sciences, physical education, music, dance, and liberal arts and sciences.

To find out more about WSU, go online to wichita.edu.

**History**

Wichita State University began as Fairmount College, a Congregational institution, in 1895. The college also continued the college preparatory program of Fairmount Institute, which began in 1892. In 1926, by a vote of the citizens of Wichita, the college became the Municipal University of Wichita, the first municipal university west of the Mississippi. After 38 years as a municipal university, WSU again changed its status July 1, 1964, when it entered the state system of higher education. The citizens of Wichita had voted to move the university into the state system and when the measure passed the Kansas Legislature, Wichita endowed WSU with a 1.5 mill levy, a tax that was later adopted by Sedgwick County. The WSU Board of Trustees administers these funds and other local assets of the university.


**Academic Resources**

**Libraries**

University Libraries comprises Ablah Library, the main library; the McKinley Chemistry Library; and the Thurlow Lieurance Memorial Music Library. These libraries support teaching and research at WSU through a wide range of materials, facilities, and services. The collections include more than three million books and periodicals, microforms, government publications, corporate annual reports, scores, videotapes, audio recordings, and over 130 electronic databases. Ablah Library has been a Government Documents Depository Library for over 100 years and is an official United States Patent and Trademark Depository Library, the only such depository in Kansas.

Ablah Library facilities include seating for more than 800 people, group and faculty study carrels, a 24-hour study room, equipped seminar rooms, and a coffee bar. Over 125 computer work stations with access to the University Libraries’ online catalog, electronic databases, and Internet are located throughout the building. These workstations also provide word processing, spreadsheet, and relational database capabilities, and are networked to print stations. Twelve laptops are available for in-library use. Students have access to a wireless network throughout the building. Other facilities include carrels with listening and viewing equipment, microform reading and printing equipment, photocopiers, scanners, and color printers.

University Libraries offer students a variety of services, including convenient hours and remote access to the online catalog and electronic resources. Reference librarians and technical help desk personnel are available to help library users locate information and use the equipment, facilities, and campus networking services. An interlibrary loan service provides access to materials that are not owned by the library by locating and borrowing them from other institutions.

The department of special collections houses the university archives, rare books, historical Kansas maps, and a growing manuscript collection of more than 700,000 documents, many of which are digitized and available via the Internet. This collection includes papers of the abolitionist William Lloyd Garrison, the Baughman Collection of Early Kansas Maps, and local history collections, all of which can be helpful for student research.

More information about library resources and services is located on the libraries’ Web site at library.wichita.edu.

**University Computing**

The University Computing and Telecommunications Services (UCATS) organization provides the informational backbone for campus communications. In addition to the network infrastructure, UCATS supports the programs and technology for the administration of the university. Responsibilities include phone services, network connectivity, application support and training, programming support, desktop diagnosis and repair, network administration, security, operations, and technological consulting. More
details about these and other services are online at: wichita.edu/ucats.

**Open Student Computer Labs**
UCATS maintains two open computer labs in Jabara Hall, rooms 120 and 122. These labs are configured with up-to-date personal computer systems and an abundance of software applications. Other services that are available are Macintosh systems, scanning, laser printing, and color printing. There are lab assistants and professional staff available to support the use of these applications, systems, and other services such as e-mail support, Internet use, and class project assistance.

**Jabara Hall, room 120, 122**  
**Hours:**  
Monday–Thursday 7 a.m.–10 p.m.  
Friday 7 a.m.–6 p.m.  
Saturday 10 a.m.–6 p.m.  
Sunday 1 p.m.–6 p.m.

**Campus Network Access**
All residence hall students are provided a direct, high-speed connection to the campus network and the Internet. Wireless access to the campus network (and Internet) is also available from all campus buildings by registering the wireless network card via their myWSU account.

**E-mail (wichita.edu)**
Every WSU student is automatically assigned an e-mail account with the “@wichita.edu” suffix. This electronic mailbox allows students to send and retrieve communication. The use of e-mail is provided as a source of communication for academic pursuits. Students are expected to use this e-mail address for university communication. Applications, instructions, and other information about e-mail accounts are available at the online WSU e-mail center: wichita.edu/email.

**myWSU**
The myWSU portal is a Web site that allows students to view and update their own WSU information. Examples are: add/drop courses, check academic status, check on status of financial assistance, and get academic history (grades). For more information about this service, go to: myWSU.wichita.edu, and click on the New to my WSU link.

**Media Resources Center**
The Media Resources Center (MRC) is a comprehensive media and video communications organization serving the instructional, research, and service missions of Wichita State University.

The MRC operates the university’s cable television station, WSU-TV, and programs three other channels: Channel 21, MTVU; Channel 17, the International Channel; and Channel 20, the Campus Information Channel (CIC).

The MRC oversees the radio station licensed to the university, KMUW 89.1 FM. A public radio station, KMUW also operates the Wichita Radio Reading Service.

Facilities and resources at the MRC include an interactive television (ITV) classroom, a multimedia lab, and a professional television production studio. The MRC designs, installs, and maintains master classrooms across campus.

A wide array of media equipment is available for classroom use by students and faculty. This includes video recording systems and projection equipment.

**KMUW**
KMUW 89.1, a listener-supported radio station, consistently ranks as one of the top thirty non-commercial stations in the nation*. KMUW is licensed to Wichita State University and operates at 100,000 watts with a schedule of programming rich in arts, news and ideas. KMUW and public radio takes a leadership role in the in-depth analysis of political, economic, and social news. KMUW supports local arts and culture in the community through active involvement in their promotion and production of five music programs: Jazz Café, Global Village, Strange Currency, Soulutions, and Moonglow. Student intern positions are available.

*(SOURCE: based on audience data © Arbitron and RRC, 2002-2009)*

**Cable Television**
Wichita State University operates WSU-TV, which is carried on more than 20 cable television systems in the Wichita area. Programming is provided by The Research Channel, a consortium of research universities, which promotes greater public awareness of research activities in progress around the world.

Additional programming consists of telecourses offered each semester for academic credit. Local programming includes a weekly student newscast and occasional specials of university events.

**Language Labs**
The Savaiano-Cress Language Laboratories offer a variety of media services to foreign-language students. Audio, video, and computer equipment are available to students and faculty alike, with the goal of enhancing and expanding the learning experience through the use of instructional media. Hours are flexible to accommodate all students’ needs.

**Writing Center**
The Writing Center is open 11 a.m.–7 p.m. Monday through Thursday and 11 a.m.–3 p.m. on Friday. It opens the second week of classes and closes at the end of the last day of classes each semester. It is not open on study day, during finals, or on holidays.

**University Facilities**
Wichita State’s main campus is located on a 330-acre site bounded by Hillside, Oliver, 17th and 21st streets in northeast Wichita.

**Eugene M. Hughes Metropolitan Complex**
The Eugene M. Hughes Metropolitan Complex, located at 29th Street North and Oliver, is considered part of the main campus. Named for WSU’s 11th president Eugene Hughes, the 17-acre site has many amenities, including the 1,750-seat Roger Lowe Auditorium, the 145-seat Frederick Sudermann Commons, and the

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**General Information**

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Richard Welsbacher Experimental Theater, a black-box theater. The complex also has a gymnasium, an 80-seat meeting room, several classrooms and playfields for intramural sports. The facility houses the division of continuing education, which offers noncredit courses to the community. Special services including the Speech-Language-Hearing Clinic are available at the Eugene M. Hughes Metropolitan Complex, 978-3258.

**Grace Memorial Chapel**

Harvey D. Grace Memorial Chapel, located in the heart of the campus near Morrison Hall and the Rhatigan Student Center, was built in 1963 and dedicated to serve all creeds and races. The chapel is available to students for group or individual worship and meditation, and is a frequent location for weddings.

**National Institute for Aviation Research**

Since its inception in 1985, the National Institute for Aviation Research at Wichita State University has made a name for itself as the most capable university aviation research center in the United States. NIAR provides research, design, testing and certification to the aviation manufacturing industry, government agencies, educational entities and non-aviation related businesses.

With 135,000 square feet of research and office space, the institute is home to more than a dozen labs.

The institute serves the needs of industry and government and supports educational programs of the university, providing facilities for both faculty and student research in support of the College of Engineering and Fairmount College of Liberal Arts and Sciences.

NIAR is also proud to hold two FAA Center of Excellence designations. NIAR is a Center of Excellence for General Aviation Research (CGAR) and is the headquarters for the Center of Excellence for Composites and Advanced Materials (CECAM). Other government organizations have also designated NIAR as a research hub. NASA sponsors the National Center for Advanced Materials Performance (NCAMP), located within NIAR, and the National Science Foundation has named WSU/NIAR as a center for Friction Stir Processing (CFSP). NIAR is also supported by the Kansas Technology Enterprise Corporation (KTEC) as a Center of Excellence.

Find out more at [www.niar.wichita.edu](http://www.niar.wichita.edu).

**Plaza of Heroines**

Surrounded by Ahlah Library, Jabara Hall, Grace Memorial Chapel, and Clinton Hall, the Plaza of Heroines is a beautiful and welcome gathering place. Danseuse Espagnole (Spanish Dancer), by artist Sophia Vari, is a striking addition to WSU’s highly regarded outdoor sculpture collection and the centerpiece of the plaza. Landscaping and benches surround the sculpture enhancing the circular plaza, constructed of bricks and granite pavers engraved with the names of honored women. A nearby touch-screen computer in the lobby of Jabara Hall displays personal histories and reflections submitted by contributors for each honoree. Proceeds from the plaza project benefit the Center for Women’s Studies scholarship fund.

**Rhatigan Student Center**

See description of the Rhatigan Student Center on page 36.

**South Campus**

In spring 2008, WSU began offering courses at its South Campus located at 200 West Greenwood Street, Suite 15A, Derby. The South Campus sports state-of-the-art audio-visual teaching technology and equipment. It contains 30 work stations in the computer laboratory and six in the student study areas.

The South Campus offers both general education courses and degree programs. Of note, the accelerated nursing program is hosted at the South Campus. Under this program, nursing students graduate in only 15 months. The university anticipates that additional programs will be offered at the South Campus in the years to come.

Select student services, textbook ordering and delivery, and library bookdrop are also available at the South Campus.

**Sport Facilities**

See description of the university’s sports and recreation facilities on page 36.

**Ulrich Museum of Art**

Open up to a new art experience! The Ulrich Museum of Art, located in the southwest corner of campus and featuring a bright, colorful mural on the front of the building, develops and presents an endless stream of groundbreaking exhibitions, prominent guest speakers and compelling performances that explore today’s visual culture. Free events such as the Ulrich Spa Getaway (with hand and chair massages during finals week) and the Members’ Opening Parties (complete with live music and complimentary food and beverages) give WSU students an opportunity to see great works of art in a fun and relaxed setting.

In addition to the art inside the museum, the Ulrich has one of the top ten outdoor sculpture collections in the U.S. (2006 Public Art Review). Free maps of the outdoor sculpture collection are available at the museum’s main desk.

WSU students receive a free membership when they stop by the Ulrich Museum with their Shocker card to activate their membership.

Hours: 11 a.m.–5 p.m. Tuesday–Friday and 1–5 p.m. Saturday and Sunday; closed Mondays and major/university holidays.

**West Campus**

WSU offers more than 100 class sections each semester at the West Campus located at 3801 N. Walker Avenue, which is near the intersection of 37th Street North and Maize Road.

A full criminal justice degree program is available at the West Campus. Additionally, general education and upper-level courses are offered in select disciplines. Some graduate-level course offerings, including Master of Social Work and teacher recertification workshops are also available. This campus offers services such as career services, financial aid, tuition and fee payment, as well as a library book drop.

Textbook ordering and delivery are also available. For further questions call: (316) 978-6777.

**Wiedemann Hall**

Wiedemann Hall houses the first pipe organ built in North America by the world-renowned firm of Marcussen and Son, Denmark. The hall, dedicated in 1986, is the ideal acoustical setting for the organ. In addition to the hall’s main auditorium, the building has four faculty offices, an organ studio, and rooms to accommodate broadcasting, recording, and televising.

**University and Student Support Areas**

**Alumni Association**

Deborah L. Kennedy, Executive Director

The WSU Alumni Association is the oldest and largest support organization for Wichita State University. Founded in 1913, the alumni association is the network through which the university community and its alumni communicate with and serve one another. The primary intent of the partnership between the association and the university is to ensure the continued excellence of Wichita State. But this serious mission certainly doesn’t mean the association isn’t serious
about fun, too. Scores of exciting Shockers Forever events offer students the chance to sport their official Kansas tags, and, at the same time, contribute to student scholarships. The tag program pours thousands of dollars each year into scholarships for deserving students.

For more information about the groups, events, projects and publications of the WSU Alumni Association, visit wichita.edu/alumni, call (316) 978-3290, or drop by the Woodman Alumni Center, 2035 E. 21st Street, just east of Eck Stadium/Tyler Field.

**WSU Foundation**

Elizabeth H. King, president and CEO

The WSU Foundation, the private fund-raising organization of the university, strives to enhance a community of learning excellence for our students and faculty through philanthropy and stewardship. Private contributions are necessary to support the programs and vision of the university beyond current funding from fees, tuition, and government monies.

Gifts of cash, stock, real estate, and in-kind gifts are coordinated through the foundation. Planned gifts, most commonly established through a donor’s estate or insurance policy set up to benefit the university, also are coordinated through the foundation.

For fiscal year 2009, $5.4 million was given to university programs from endowed funds of the foundation. Of that, $2.6 million was in the form of scholarships to undergraduate and graduate students. The remainder funds projects such as faculty support, research, Ablah Library, and the Ulrich Museum of Art.

For more information, contact (316) 978-3040 or foundation.wichita.edu, where contributions can be made online.

**Office of Student Life**

The Office of Student Life promotes student development and support by providing various programs and services designed to support all students’ out of class experiences. Student life departments include Housing & Residence Life, Heskett Center, Child Development Center, Center for Student Leadership, Office of Multicultural Affairs, The Office of Career Services, Judicial Affairs, Counseling and Testing Center, and Student Health Services. Additional services include the Court of Academic Appeals. The Office of Student Life also publishes the Student Handbook, which provides information regarding relevant policies and procedures including the Student Code of Conduct. Students may obtain a copy of the code or bring their concerns about student life to 303 Grace Wilkie Hall.

**Career Services**

The Office of Career Services provides career advice and employment-related assistance to students, alumni, faculty, staff and community members.

Individual career counseling is available to assist with planning and decision making. Assessment instruments, including the Strong Interest Inventory and StrengthsFinder are offered for self-assessment. Workshops, presentations and classroom instruction help people to learn about the responsibilities of various career fields, to prepare resumes and to conduct effective employment interviews.

Information on occupations and careers, news on employment trends and annual salary survey reports can be found in the Career Library in the career services office—203 Grace Wilkie. The Career Library also houses a lab with computers for student use when preparing job search documentation such as resumes and cover letters. Internet access is available for students and alumni conducting career research or a job search.

ShockWORKS is an online recruiting tool available to all students and alumni of WSU. National, regional and local employers post jobs online. ShockWORKS is also a resume database used by employers trying to fill degreed and non-degreded positions. Other employment services offered include career fairs and on-campus interviews.

Students who need to decide on a major, want information on a career field, need a resume critique, want a part-time job, or are about to graduate and need full-time employment, can contact career services at (316) 978-3435 or career.services@wichita.edu.

**Child Development Center**

The WSU Child Development Center is located at 3026 East 21st Street North, at the NW corner of Hillside and 21st Street. It is a licensed child care center for children of WSU students, faculty, staff, alumni, and community. A diverse staff of qualified lead teachers and WSU student assistants facilitates developmentally appropriate activities—art, language, science, math, music, and literature—in a hands-on learning environment. The child care center is open Monday through Friday from 7:30 a.m. to 5:30 p.m. for children 6 weeks to 6 years old.

Enrollment is limited so it is recommended to get on the waiting list as soon as possible. Child care assistance is available for WSU student parents who demonstrate financial need; applications may be obtained at the center.

For more information, call (316) 978-3109, or online at: studentaffairs.wichita.edu/edc.

**Counseling and Testing**

The Counseling and Testing Center provides psychological services for personal and mental health issues. Professional counseling is offered to all members of the university community—students, faculty, and staff. Consultation regarding concerns about students and coworkers is also available. Academic testing services are also part of the center’s function. The center’s testing offerings include the credit by exam program, certification tests for community professionals, CLEP tests, and entrance exams for colleges and graduate schools.

Contact the Counseling and Testing Center in 320 Grace Wilkie Hall, at (316) 978-3440, or online at: wichita.edu/counselingtesting.

**Disability Services**

The Office of Disability Services provides academic accommodations for students who experience physical, learning or mental disabilities. Students are required to provide appropriate documentation to the director of disability services before classroom services are provided. For more information, contact: Office of Disability Services

Wichita State University
1845 Fairmount
Wichita, Kansas 67260-0132
(316) 978-3309, voice/TTY
(316) 978-3114, fax
wichita.edu/disrv

Services are based on the student's need for academic accommodation. Disability services encourages students to be independent on campus and to use those services which help maximize their educational experience.

**International Student Services**

The Office of International Education serves the special needs of approximately 1,400
international students from more than 100 countries enrolled at Wichita State University. (For international student admission requirements, see page 13.) An orientation program specially designed for new international students prepares them for entrance into the U.S. academic system and way of life.

The office also sponsors Friendship International for Women, the Cultural Ambassador Program, and other activities that promote interaction between U.S. and international students.

In addition, the office houses a study abroad reference center which provides information to U.S. students on study, work, and travel opportunities abroad.

For more information, contact the Garvey International Center, (316) 978-3232.

**Rhatigan Student Center**

The Rhatigan Student Center (RSC) is the community center for Wichita State University. Through its facilities and services, the RSC serves students, faculty, staff, alumni, and guests of the university.

The Copperfields Food Court in the RSC includes Taco Bell®, Chick-Fil-A®, The Diner and Grille, The Corner Market, and The Station—which includes Pizza Hut®, as well as University Dining Services to meet further needs.

The University Bookstore, on the first floor of the RSC, stocks all required textbooks, computer software and hardware at educational prices, art supplies, general reading material, greeting cards, Shocker souvenirs, and gifts.

The RSC's William H. Smith Bowling and Recreation Center is located on the lower level for leisure use. It includes bowling, pool, video games, poker tournaments, snacks, locker rental, an engraving shop, laminating services, and a hair salon. The center, perfect for parties, is available for campus and non-campus group rentals at reasonable rates. The center is also the home of the nationally ranked Shocker men's and women's bowling teams.

The Student Activities Council (SAC), in the RSC, provides students an opportunity to learn and develop leadership skills while planning a variety of programs for the campus. The SAC is the largest event-planning organization on campus; it sponsors more than 200 events annually, including Shocktoberfest and Hippodrome.

The RSC is also home for the Student Government Association, Student Advocate, Shocker Card Center, Commerce Bank, WSU Campus Ministries, Center for Student Leadership, and the RSC Art Gallery. Additionally, the RSC has a 450-seat theater and a variety of meeting rooms that can be scheduled for meetings, special events, and conferences.

The University Reservations Office schedules the use of all facilities in the RSC as well as most university facilities for out-of-classroom use. Additionally, the reservations office manages the University Information Center (UIC) on the first floor of the RSC. Call the UIC at 978-INFO (4636) for any information about WSU.

The RSC is supported through revenues generated from within the operation and from student fees. Visit the RSC on the Web at wichita.edu/RSC.

**Sports and Recreation**

Numerous sports and recreation programs exist at the university.

As an NCAA Division I member, Wichita State competes in the Missouri Valley Conference; WSU men compete in basketball, baseball, cross country track, tennis, and golf. WSU women compete in basketball, softball, cross country track, tennis, golf, and volleyball. The university fields teams in bowling and crew as independent sports.

There is also an extensive campus recreation program. Club sports include spirit squad, dance squad, raquetball, men's and women's soccer, men's volleyball, wheelchair athletics, ice hockey, and aikido. Intramural sports include flag football, basketball, table tennis, badminton, soccer, softball, bowling, swimming, and raquetball. A regulation 18-hole golf course is available as one of only a few on-campus golf facilities in the country.

Students with a current Shocker ID card are admitted free to all varsity athletic events.

**Sport Facilities**

The 10,478-seat Charles Koch Arena, which is used for intercollegiate basketball games, volleyball matches, and major entertainment events, is the home of WSU intercollegiate athletics. Other recreation facilities include Cessna Stadium, a 31,500-seat football and track and field facility which hosts high school and community events; the 7,851-seat Eck Stadium—Home of Tyler Field, home to the Shocker baseball program, which underwent a $7.8 million renovation in 2000 and ranks among the finest college baseball facilities in the country; the Sheldon Coleman Tennis Complex with eight lighted courts, home to WSU's men's and women's intercollegiate tennis program; and the 1,000-seat C. Howard Wilkins Softball Facility for intercollegiate softball for women. Visit us online at: goshockers.com.

The Heskett Center, a multipurpose, dance, physical education, and recreation complex, contains instructional, research, and recreational areas. Activity areas consist of a weight room, circuit training room, combatives room, 25-meter indoor swimming pool with separatediving well, seven handball/raquetball courts, a squash court, indoor climbing wall, and a 200-meter indoor jogging track which surrounds five basketball courts. The outdoor area contains a six-court lighted tennis complex and two large lighted playing fields. Students must show a current Shocker ID card to use the activity areas for recreation or for classes. Check our Web site: wichita.edu/heskett.

**Office of Multicultural Affairs**

The Office of Multicultural Affairs (OMA) envisions an all-inclusive multicultural campus community of interdependent and interconnected cultures at Wichita State University. In this multicultural community, all its members see themselves as ambassadors of human relations, whose individual and collective role is to promote, encourage, and support inclusiveness, respect, fairness, access, equity, and justice for all people. Wichita State University aspires to become an all-inclusive campus community where its citizens recognize themselves first, as members of one common race—the human race—and second, as representatives of a particular racial, ethnic, gender, religious, political, or any other group.

The Office of Multicultural Affairs promotes an all-inclusive global diversity at Wichita State University. Such community is anchored in a campus climate that is inviting, welcoming, supportive, caring, and nurturing; one in which its citizens, regardless of their human and socioeconomic differences, can co-exist in harmony. In addition, the OMA serves as a catalyst for promoting a culture of collective responsibility for the multiculturalization and globalization of Wichita State University. OMA is committed to supporting the overall mission of Wichita State University and works collaboratively with university communities to offer year-round all-inclusive, educational, cultural, social, and outreach programs for students, faculty, administrators, and staff that are aimed at achieving academic excellence, institutional strength, and campus unity.

OMA offers dozens of events related to all aspects of diversity and in observance of theme
months such as Black History Month, Women’s History Month, Asian/Pacific American Heritage Month, Hispanic Heritage Month, Domestic Violence Awareness Month, and Native American History Month. The staff collaborates with groups and departments throughout the campus to provide relevant programming.

OMA also is home to the Multicultural Student Mentoring program, a peer-based program which matches successful juniors and seniors with entering freshmen to help ease the transition from high school to college, makes new students aware of services available to them on campus, and encourages involvement in campus life.

The Office of Multicultural Affairs is located in 174 Grace Wilkie East (Annex) adjoining Grace Wilkie Hall. The office provides a lounge area, library and current periodicals with ethnic/diversity topics, and a small computer lab. Visitors are welcome 8:00 a.m.–5:00 p.m. weekdays. For information on events, and to learn more about OMA, please visit our Web site at wichita.edu/multicultural.

**Student Government Association**

Wichita State believes that one of its primary tasks is preparing students for the responsibilities of citizenship in a democratic society. With this in mind, the university places an increasing emphasis on the role the Student Government Association plays on campus.

The legislative, executive, and judicial responsibilities of SGA are vested in the Student Senate, the executive officers and cabinet, and the University Supreme Court. The senate appoints students to many university and faculty senate committees, recognizes and funds more than 150 student organizations, and allocates approximately $6 million annually in student fees to campus agencies including the Heskett Center, Rhatigan Student Center, and Student Health Services. SGA also provides opportunities to fund education through the Rhatigan Leadership Scholarship and provides financial assistance for child care through the child care assistance program. The cabinet executes the decisions of the senate and the officers. The supreme court issues opinions on constitutional questions and also serves as an appellate court for traffic appeals. Each of these entities also participates in the determination of university policy.

Each student is automatically a member of SGA and is eligible to vote in the annual elections in April. Throughout the year, openings exist on the Student Senate, as well as in many of the university committees. All students are encouraged to participate in student government through the many opportunities SGA offers.

For more information, contact the Student Government Association, Room 202, Rhatigan Student Center, Wichita State University, (316) 978-3480.

**Student Health Services**

Student Health Services, the on-campus health care facility for students, is located in 209 Althberg Hall. Ambulatory health care is provided for students with illness, injury, questions, concerns, or problems. Staffed by professional nurse practitioners, nurses, and physicians, SHS offers a wide range of services.

Insurance is recommended, but is not required to be seen at Student Health Services.

For more information, call (316) 978-3620 or check: wichita.edu/shs.

**Veterans Services**

The Office of Veterans Services, 203 Jardine Hall, provides services to veterans and active duty people. The services span the entire range of benefits and include certification for benefits to the VA, financial assistance information, and work-study for veterans.

Wichita State University is designated a Serviceman’s Opportunity College. For more information, visit the Web site wichita.edu/veterans.

**TRIO Disability Support Services**

The TRIO Disability Support Services program provides opportunities for academic development, assists students with basic college requirements, and motivates students with disabilities towards the successful completion of a baccalaureate degree.

The program’s goal is to increase the college retention and graduation rates of students with learning, physical, and psychological disabilities. Services provided by TRIO DSS include: academic advising, individualized tutoring, career exploration and referral, study/life skills improvement, scholarship opportunities, computer technology lab usage, financial aid search, graduate school selection and information, course selection and degree planning assistance, book/computer loan program (desktop and laptop) and campus and community involvement opportunities. For information, contact TRIO DSS at (316) 978-5949, stop by 158 Grace Wilkie Annex, or visit wichita.edu/dss.

**University Policies**

**Student Responsibility**

Students at Wichita State University have the following responsibilities:

1. To consult their advisers on all matters pertaining to their academic careers, including changes in their programs;
2. To observe all regulations of their colleges and select courses according to the requirements of that college;
3. To attend all meetings of each class in which they are enrolled (instructors will announce at the beginning of the semester if they consider attendance in computing final grades);
4. To fulfill all requirements for graduation;
5. To be personally responsible for fulfilling all requirements and observing all regulations at Wichita State;
6. To answer promptly to all written notices from advisers, faculty, deans, and other university officers;
7. To file an application for degree in the appropriate college office by the published deadline for the semester in which graduation is intended; and
8. To enroll in only those courses for which the stated prerequisite(s) have been satisfactorily completed. Failure to comply with this procedure may result in administrative withdrawal.

Students also should comply with the principles in the following statement:

Wichita State University reaffirms the principle of intellectual freedom in scholarly activity for university students, and it recognizes the full citizenship rights of students in inquiry, discussion, and such actions as they may choose to take on public issues.

The rights and freedoms of students involve concomitant responsibilities. Incumbent on all students, as on all citizens, is the responsibility to observe the university’s rules of orderly procedures and the laws of the larger community of which the university is a part. In the matter of actions on public issues, to speak one’s opinion, to petition, to distribute literature, to assemble peacefully and hold meetings, to use the persuasion of ideas and other actions within the bounds of orderly and lawful procedures are sanctioned by the university. But infringement on the rights of others, acts or threats of violence to persons, destruction of property, disruption, or other interference with the normal functioning of the university and its personnel and other disorderly and unlawful acts will not be countenanced.
Within its sphere of responsibility the university will afford students proper procedural safeguards to resolve matters in dispute. Those who willfully violate university standards must expect to face disciplinary action on the part of the institution, which may include reprimand, probation, or suspension, consistent with campus provisions for due process.

**Student Code of Conduct**
The Student Code of Conduct details guidelines regarding student conduct and student disciplinary procedures. These guidelines cover topics such as academic honesty, drug use, hazing, gambling, weapons, and sexual harassment. The disciplinary procedures outline the actions needed to file a complaint and the course followed in student disciplinary hearings.

The Student Code of Conduct is located online in section 8.05 of the WSU Policies & Procedures Manual. From the WSU homepage at wichita.edu, click on "Browse A–Z" and choose P for the Policies and Procedures Manual, then follow the links to the student policies and procedures section 8.05.

**Release of Student Information Policy (Privacy Law)**
The Family Educational Rights and Privacy Act of 1974 (FERPA) is a federal law which provides that the institution will maintain the confidentiality of student education records.

Wichita State University accords all the rights under the law to students. Those rights are: (1) the right to inspect and review the student's education records; (2) the right to request the amendment of the student's education records to ensure that they are not inaccurate, misleading, or otherwise in violation of the student's privacy or other rights; (3) the right to consent to disclosures of personally identifiable information contained in the student's education records, except to the extent that FERPA authorizes disclosure without consent; (4) the right to file with the U.S. Department of Education a complaint concerning alleged failures by Wichita State University to comply with the requirements of FERPA; and (5) the right to obtain a copy of Wichita State University's student records policy.

No one outside the institution shall have access to nor will the institution disclose any information from students' education records without the prior written consent of the student(s) except to personnel within the institution who have a legitimate educational interest, to persons or organizations providing students financial aid, to accrediting agencies carrying out their accreditation function, to persons in compliance with a judicial order, and to persons in an emergency in order to protect the health or safety of students or other persons. All these exceptions are permitted under the act.

Within the Wichita State community, only those members, individually or collectively, acting in the students' "legitimate educational interests" are allowed access to student education records. These members include personnel in the offices of admissions, registrar, financial operations, computing center, dean of students, financial aid, career services, cooperative education, planning, testing, library, college deans, academic advisers, and other administrative and academic personnel within the limitation of their need to know. "Legitimate educational interests" means (1) the information or records requested is/are relevant and necessary to the accomplishment of some task or determination; and (2) the task or determination is an employment responsibility for the inquirer or is a properly assigned subject matter for the inquirer's employment responsibility.

A Social Security number and student status data may be provided to other state agencies for use in detection of fraudulent or illegal claims against state monies.

**Public Notice Designating “Directory Information”**
At its discretion the institution may provide “directory information” to anyone in accordance with the provisions of the act.

Wichita State University hereby designates the following student information as public or “directory information.”

- Name, address(es), e-mail address, telephone number(s), dates of attendance, classification (freshman, sophomore, etc.), course load (full time, half time, less than half time) class type (day, day/ evening, weekend only) previous institution(s) attended, major field(s) of study, awards, honors (includes dean’s list), degree(s) conferred (including dates), past and present participation in officially recognized sports and activities, physical factors (height, weight of athletes).
- The names and address(es) of the student’s parent(s) or guardian(s) may be disclosed when used for an official educational purpose.
- The names and addresses of the student’s parent(s) or guardian(s) may be disclosed when used for an official educational purpose.

Currently enrolled students may withhold disclosure of “directory information” (on an all or none basis) to non-institutional persons or organizations. Students have an option to protect their privacy and not have such information as their addresses and telephone numbers released. Forms requesting the withholding of this information are available in the Office of the Registrar, 117 Jardine Hall, and should be returned to that office. Otherwise, the university assumes a student approves of disclosure of that information. The completed form must be received at the registrar's office by the end of the second week of the fall semester if requesting to be excluded from the Campus Directory, which is published each fall and which is available to people outside WSU.

A Student Phone Book is also available on the WSU Web site; student names and phone numbers will appear there unless the above-mentioned form has been completed and submitted.

**Family Educational Rights and Privacy Act (FERPA)**

1. **Definitions**
   - **A. Consent:** Consent shall be in writing and shall be signed and dated by the student giving consent. It shall include: (a) specification of records to be released; (b) purposes for such release; and (c) parties or class of parties to whom such records may be released.

   **B. Directory Information:** The information described in Section 99.3 of the “Final Rule on Education Records, Privacy Rights of Parents and Students.” The information is defined as: "Information contained in an education record of a student which would not generally be considered harmful or an invasion of privacy if disclosed. It includes, but is not limited to the student's name, address, telephone listing, date and place of birth, major field of study, participation in officially recognized activities and sports, height and weight of members of athletic teams, dates of attendance, degrees and awards received, and the most recent previous educational agency or institution attended.”

   **C. Disclosure:** Permitting access or the release, transfer, or other communication of education records of the student or the personally identifiable information contained therein, orally, or in writing, or by electronic means, or by any other means to any party.

   **D. Education Records:** Those records that are directly related to a student and that are maintained by the university or by a party acting for the university.

   Excluded from the category of “education records” are the following and to which the law does not guarantee the right of student access:
   - (1) Records created by an individual staff member that are not revealed to any other
individual except to a person who might substitute for, or replace, the original staff member.

(2) Medical and psychological records that are maintained only in connection with provision of treatment to the student and that are not available to persons other than those providing treatment except that such records may be personally reviewed by a physician or other appropriate professional of the student's choice and with the student's written consent.

(3) Records of the WSU Police Department maintained solely for law enforcement purposes, which are maintained separately, and which are not disclosed to individuals other than law enforcement officials sharing the same territorial jurisdiction.

(4) Records that contain only information relating to a person after that person is no longer a student at the university. An example would be information collected by the university or the WSU Alumni Association pertaining to the accomplishments of its alumni.

(5) Employment records of any person if maintained in the normal course of business and used only for purposes relating to the employment, unless the person is employed at the university only because of her or his status as a student (that is, student hourly). In such cases, student employment records are education records but are to be maintained separately from other education records.

E. Legitimate Educational Interests: The interests of university personnel who have a demonstrably legitimate need to review records in order to fulfill their official professional responsibilities. Such responsibilities must involve the university in its primary educational and scholarly functions and/or secondary administrative functions of maintaining property, disbursing funds, keeping records, providing living accommodations and other services, sponsoring activities, and protecting the health and safety of persons or property in the university community. If a question arises concerning the legitimacy of a request to review records, such question shall be referred to the vice president for campus life and university relations, and/or the vice president and general counsel.

F. Parent: Includes a parent, a guardian, or an individual acting as a parent of a student in the absence of a parent or guardian.

G. Personally Identifiable Information: Includes the name of the student; the student's parent(s) or other family member(s); the address of the student; personal identifiers, such as social security or student numbers; personal characteristics or other information that would make the student's identity easily traceable.

H. School Official: Faculty, staff, university police officers, student employees, members of the behavioral intervention team, or committees (when the members of the committee are appointed or elected to an officially constituted committee) that perform a function or task on behalf of, and at the request of, the university, its faculty, colleges, schools or divisions.

I. Student: For purposes of this policy, anyone who is or has been enrolled at Wichita State University, with the following exception:

A person who has applied for admission to, but has never been in attendance at a component unit of the university (such as the various schools and colleges of the university), even if that individual is or has been in attendance at another component unit of the university, is not considered to be a student with respect to the component to which an application for admission has been made.

J. Unit Custodian of Student Records: Except as otherwise designated in this policy, the head of each academic or administrative unit is responsible for the education records within the unit.

2. Student Access to Education Records

A. A student has the right and shall be accorded the opportunity to inspect, review, and/or receive copies of his or her educational record, except as provided for below: The university must comply with the student's request within a reasonable period of time, not to exceed 45 days after the request.

B. The student has the right to a reasonable request for explanation of the records and to copies of the records where necessary to provide full inspection and review. Such copies will be provided at the student's request and expense; however, the charge to the student for any such records may not exceed $.25 per page. The university may not charge a fee to search for or retrieve a record. If any question arises as to the identity of the requesting student, the student shall be asked to provide his or her university ID card and/or other positive identification.

C. The university is not required to afford inspection and review of the following records:

(1) Financial records of the student's parents submitted as part of the financial aid process;

(2) Confidential letters and statements of recommendation that were placed in the student's education records prior to January 1, 1975, if such letters were submitted with an understanding of confidentiality, and are used only for the purpose for which they were specifically intended;

(3) Confidential letters and statements of recommendation received after January 1, 1975, for which the student has signed a waiver of the right to access and which pertain to: (a) admission to this or any other educational institution or agency; (b) application for employment; or (c) receipt of an honor or honorary recognition so long as these letters are used solely for the purpose(s) for which they were specifically intended.

D. An individual who is an applicant for admission to the university, or to one of its component parts, or who is a student in attendance at the university, may waive his or her right to inspect and review confidential letters and confidential statements of recommendation, except that the waiver may apply to confidential letters and statements only if:

(1) The applicant or student is, upon request, notified of the names of all individuals providing the letters or statements;

(2) The letters or statements are used only for the purpose for which they were originally intended; and

(3) Such waiver is not required by the university as a condition of admission to or receipt of any other service or benefit from the university.

All waivers under this paragraph must be executed by the individual, regardless of age, rather than by the parent of the individual. All waivers must be in writing and signed by the student.

If an education record contains information on more than one student, the student may inspect only the information on himself or herself.

3. Waiver of Rights

The university may request, but not require, students to waive rights under this policy; the waivers must be in writing and signed by the student. Applicants for admission to the university and eligible students may waive rights to review confidential letters of recommendation only if:

(1) The applicant or student, upon request, is notified of the names of all persons providing letters;

(2) The letters are used only for the purpose for which they were originally intended; and

(3) The waiver is not required as a condition of admission or for any other service or benefit of the university.

Waivers may be made with respect to specified classes of education records and/or persons or institutions.

The student may revoke any waiver in writing, the revocation to apply only to documents
4. Disclosure of “Personally Identifiable” and “Directory” Information

The university shall obtain the written consent of the student before disclosing personally identifiable information from the education records of a student, other than directory information, except as otherwise provided in this policy.

The university may, without the consent of the student, disclose directory information, as described earlier. If a student wishes to have such information withheld, he or she must notify the Office of the Registrar. If a student wishes to prevent the publication of such information in the university telephone directory, he or she must notify the Office of the Registrar.

The university may disclose personally identifiable information without the consent of the student to school officials within the institution determined to have legitimate educational interests; to authorities to comply with a judicial order or subpoena, provided the university makes a reasonable effort to notify the student in advance of compliance (unless judicial order or subpoena specifically prohibits such contact); to financial aid personnel in conjunction with an application for financial assistance; to organizations conducting studies for accrediting functions; and to appropriate persons in a health or safety emergency. Disclosure of personally identifiable information without the consent of the student may also be made when required by law or government regulation.

The university may disclose personally identifiable information from the education records of a student without a student’s consent in connection with a student’s request or receipt of financial aid; to financial aid personnel in conjunction with an application for financial assistance; to organizations conducting studies for accrediting functions; and to appropriate persons in a health or safety emergency. Disclosure of personally identifiable information without the consent of the student may also be made when required by law or government regulation.

The university may disclose personally identifiable information from the education records of a student without a student’s consent in connection with a student’s request or receipt of financial aid; to determine the eligibility of the student for financial aid, provided the disclosure is needed: (1) to determine the conditions which will be applied for student assistance; (2) to determine the amount of financial aid; (3) to determine the amount of financial aid; (4) to determine the conditions which will be imposed; or (5) to enforce the terms or conditions of the financial aid.

The university may disclose personally identifiable information from the education records of a student to appropriate parties, including parents of an eligible student, in connection with an emergency if knowledge of the information is reasonably considered to be necessary to protect the health or safety of the student or other individuals. Disclosures for this purpose shall take into account the totality of the circumstances pertaining to the threat to the health or safety of a student or other individuals. If the university determines that there is an articulable and significant threat to the health or safety of a student or other individuals, it may disclose information from education records to any person whose knowledge of the information is reasonably considered necessary to protect the health or safety of the student or other individuals.

The university may disclose personally identifiable information from the education records of a student to a parent without the student’s consent regarding the student’s violation of any federal, state or local law, or of any rule or policy of the university, governing the use of alcohol or a controlled substance if the institution determines that the student has committed a disciplinary violation with respect to that use or possession and the student is under the age of 21 at the time of disclosure to the parent.

The university student health service is required to report to the Kansas Department of Health the names of students who have certain communicable diseases such as hepatitis, tuberculosis, and venereal disease. The health service is also required to report to local law enforcement officials the name of any student who is wounded with a deadly weapon.

5. Release of a Student’s Grades

Board of Regents policy provides that the university may not withhold the written record of grades earned by any dependent student when the university receives a written request for any such grades from a student, a student’s parents, or a student’s legal guardian. The student will be notified in writing of any disclosure of his or her grades made to his or her parents or legal guardian. Dependency, for this purpose, is defined by the Internal Revenue Code, as amended. Should the student be financially indebted to the university, a transcript request will not be honored and the person submitting the request will be so notified.

6. Notice to Third Parties

The university must inform the parties to whom personally identifiable information is given that they are not permitted to disclose that information to others without the written consent of the student and that the information is to be used only for the purpose(s) intended.

7. Providing Copies of Disclosed Records

When the unit custodian discloses personally identifiable information from the education record of a student, the unit custodian shall, at the student’s request and expense, provide a copy of the disclosed record to the student, unless otherwise specified by this policy.

8. Destruction of Records

Education records shall be maintained consistent with university policy on the retention of records. No education record, however, may be destroyed if there is an outstanding request to inspect and review the record. Also, the record of access to the education record and any explanations which are a part of the record must be maintained for as long as the education record to which it pertains is maintained.

9. Maintaining Records of Request and Disclosures

The unit custodian shall maintain records of requests and disclosures of personally identifiable information from a student’s education record. The record shall include, whether requests are granted or not, the name(s) of the person(s) who requested the information and their legitimate interests in the information. Records of requests and disclosures will not be maintained:

(1) for requests made by the student; (2) for requests for which the student has given written consent; (3) for requests made by school officials with legitimate educational interests; (4) for requests for directory information.

The record of requests and disclosures may be inspected by the student, by school officials responsible for the custody of the records, and by federal and state officials who have been given permission to access by the vice president for campus life and university relations.

10. Students’ Right to Challenge Information Contained in Education Records

A student may challenge the content of an education record on the grounds that the record is inaccurate, misleading, or otherwise in violation of the privacy or other rights of the student. No hearing under this policy shall be granted for challenging the underlying basis for the grade. However, the accuracy of its recording could be challenged.

The following procedure for challenging the content of an education record shall apply:

1. The student has the right, upon reasonable request, for a brief explanation and interpretation of the record in question from the respective unit custodian.

2. The unit custodian of the challenged education record, after reviewing the record with the student, may settle the dispute informally with the student with regard to the deletion or modification of the education record. The unit custodian shall make his or her decision within a reasonable amount of time and shall notify the student of the decision.
3. In the event the unit custodian disapproves the student’s request to delete or modify the record in question, the student shall be notified by the unit custodian, in writing, of the decision and of the student’s right to a formal hearing upon the request.

   a. All requests for formal hearings by the student shall be directed to the vice president for campus life and university relations, and shall contain a plain and concise written statement of the specific facts constituting the student’s claim.

   b. The hearing shall be conducted by a university staff member (hearing officer) who does not have a direct interest in the outcome of the challenge and who shall be appointed by the vice president for campus life and university relations or designee. The hearing shall be held within a reasonable time of receipt of the student’s request and the student shall be notified reasonably in advance by the hearing officer of the date, place, and time of the hearing.

   c. At the hearing the student shall be afforded a full and fair opportunity to present evidence relevant to the claim and may, at his or her expense, receive assistance or be represented by any individuals of choice.

   d. Based solely on the evidence presented at the hearing and within ten (10) working days of the hearing, the hearing officer shall make a written recommendation to the vice president for campus life and university relations or designee together with written findings of fact concerning the student’s request. Within an additional fourteen (14) working days of receipt of the hearing officer’s report, the vice president for campus life and university relations or designee shall notify the student in writing of the decision. The decision must include a summary of the evidence and the reasons for the decision.

4. In the event the decision of the vice president for campus life and university relations is adverse to the student’s request, the student shall be notified of the opportunity to place with the education record a summary statement commenting upon the information in the record and/or setting forth any reason for disagreeing with the decision. If the questioned document is released to a third person, the student’s summary statement shall accompany the release of any such information. The summary information shall be maintained for as long as the contested record is maintained.

5. If a student challenge to the content of a given record is successful, the university shall amend the education record accordingly and so inform the student. Upon the student’s specific written request to the vice president for campus life and university relations, the university shall make a reasonable effort to contact student-designated third persons who have received copies of the previous record to inform them of the change which has been made.

11. Complaint Procedure

If a student believes that the university is not in compliance with the Privacy Act, the student should check first with the office involved and/or the office of the vice president for campus life and university relations.

If a student wishes to file a complaint with the federal government concerning the university’s failure to comply with the Privacy Act, he or she must submit the complaint, in writing, to the Office of the Family Educational Rights and Privacy Act, Department of Health, Education and Welfare, 330 Independence Avenue, S.W., Washington, D.C. 20201. The FERPA office will notify the student when the complaint has been received. The FERPA office will investigate the complaint, and may require further information of its findings and basis for such findings. In the event the university is found not to be in compliance, it will be afforded the necessary time to comply. If it does not then comply, the matter will be sent to a review board for a hearing. For guidelines concerning this hearing procedure, see Section 99.64 and following of the Privacy Act.

Notice of Nondiscrimination

1. It is the stated policy of Wichita State University to prohibit discrimination in employment and in educational programs and activities on the basis of race, religion, color, national origin, gender, age, sexual orientation, marital status, status as a veteran, or disability.

2. In working to achieve and maintain a welcoming and discrimination-free environment, it is necessary and appropriate that employees and students be encouraged to make complaints and concerns about perceived discriminatory behaviors known to university supervisors and officials.

3. Any university employee or student who engages in retaliatory conduct against a university employee or student who has filed a complaint alleging discrimination or otherwise exercised their rights and privileges against illegal discrimination, will be subject to disciplinary actions pursuant to established university procedures, up to and including termination of employment or student status.

4. This prohibition against retaliatory conduct applies regardless of the merits of the initial complaint of illegal discrimination.

The vice president and general counsel and the Office of Human Resources shall have primary responsibility for publication, dissemination, and implementation of this university policy.

Any person having inquiries concerning Wichita State University’s compliance with the regulations implementing Title VI, Title IX, or Section 504 is directed to the Office of Equal Employment Opportunity, Wichita State University, 1845 Fairmount, Wichita, Kansas 67260-0205. The Office of Equal Employment Opportunity has been designated by Wichita State to coordinate the institution’s efforts to comply with the regulations implementing Title VI, Title IX, Section 504, and Americans with Disabilities Act. Any person also may contact the Assistant Secretary for Civil Rights, U.S. Department of Education, regarding the institution’s compliance with these regulations.

A link to the WSU Catalog is available online at the registrar’s Web site, wichita.edu/registrar. Inquiries should be addressed to the Office of Disability Services for large print, Braille, and audio tape versions.

Injury or Accident

The state of Kansas and Wichita State University do not insure against, and are not responsible for, accidents or injury to students which may occur during university-sponsored activities on or off campus. The university will make every reasonable attempt to advise students concerning potential danger of accident or injury. Students are expected to act responsibly by taking necessary precautions to prevent accidents. Students also are advised to protect themselves from the financial burden of accident or injury through a personal insurance policy.

Residency Requirements

See Residency Defined, page 16.

Student Identification

See page 17.

Offender Registry

Law enforcement agency information concerning registered sex offenders who are employed by or who are currently enrolled at Wichita State University may be obtained from the university police department. This information is made available to the campus community pursuant to the requirements of the Campus Sex Crimes Prevention Act. Further information on any registered offender can be obtained from the Kansas Bureau of Investigation or the sheriff’s office in the registrant’s county of registration.

Safety

Campus safety is a priority at Wichita State. The university campus is well lighted and parking lots are regularly patrolled by WSU police officers. WSU police are available to escort students in the evenings. In case of emergencies, phones (designated by a blue light at the top of the pole) with direct access to the university police station are strategically placed around the campus.

The annual security report is available at wichita.edu/annualsecurityreport. Review safety and crime prevention information in addition to daily crime logs and crime statistics at the police Web site, wichita.edu/police.
W. Frank Barton School of Business

Offices: 100 Clinton Hall
Douglas Hensler, dean
James Clark, associate dean
Kate Kung-McIntyre, assistant dean, undergraduate student support services
Tanzu Bauer, director, executive MBA program
Angela Jones, director, MBA program

Departments:
Economics, (316) 978-3220—Jen-Chi Cheng, chairperson
Finance, Real Estate, and Decision Sciences, (316) 978-3219—Rick LeCompte, chairperson
Management, (316) 978-3214—Nancy A. Bereman, chairperson
Marketing, (316) 978-3367—Stephen Porter, chairperson
School of Accountancy, (316) 978-3215—Paul D. Harrison, director

Graduate Faculty
School of Accountancy
Professors: Jeffrey J. Bryant, Paul D. Harrison (director), Bill D. Jarnagin
Associate Professor: Jeffrey J. Quirin
Assistant Professors: Jesse Dwyer, Atul Rai, Kurt F. Reding, Craig Sisneros
Lecturer: Michael Flores

Economics
Professors: Dong W. Cho, Philip L. Hersch, Martin M. Perlne
Associate Professor: Jen-Chi Cheng (chairperson), James E. Clark (associate dean), William Miles, Jodi Pekowski
Assistant Professor: Chu-Ping Vijverberg

Finance, Real Estate, and Decision Sciences
Professors: Sue Abdinnour-Helm, Stanley D. Longhofer (director, Center for Real Estate)
Associate Professors: Mehmet Barut, Timothy Craft, Richard L.B. LeCompte (chairperson), Achita Muthitacharoen, Khawaja Saeed
Assistant Professors: Rodney Boehme, Semih Tararanoglu
Lecturer: Larry Spurgeon

Management
Distinguished Professor: Gerald H. Graham (R.P. Clinton Distinguished Professor of Management)
Professors: Gaylen N. Chandler, Dharma deSilva (director, Center for International Business), Steve Farmer, Clyde D. Stoltenberg, James A. Wolff
Associate Professors: Nancy A. Bereman (chairperson), Chris Broberg, Masud Chang, Donald W. Hackett, Gergana Markova, Timothy Pett, J. Kirk Ring

Marketing
Professors: Vincenitia Claycomb, Charles L. Martin
Associate Professors: Dean E. Headley, Stephen Porter (chairperson), Robert H. Ross

Mission Statement: The Barton School of Business advances the knowledge and practice of business, reaches out to constituents, and prepares students to successfully compete in the global entrepreneurial marketplace. In pursuit of its mission, the school is committed to integrity, excellence, and collegiality.

The vision of the Barton School of Business is to be nationally recognized for developing entrepreneurial business leaders for the global marketplace.

Consistent with the university's role as the Regents' urban-serving research university, the Barton School aggressively pursues regional and national prominence for its academic and professional programs.

This mission is influenced by the location of the school in the largest economic and cultural center in the state of Kansas. As an integral part of the state's designated urban-serving research university, the Barton School of Business faculty is committed to programs and activities that will help sustain the contribution that this urban center makes to the economic, professional, and cultural health of the state and nation.

Within this context, the faculty of the school have adopted the following educational goals of the Barton School which are listed below under the headings of Students, Faculty, and Programs. For each grouping, a preamble states the basic values of the Barton School faculty.

Students: Students are the reason for the Barton School's existence. It is the faculty's responsibility to create programs and learning environments that ensure the ultimate success of students. We, the faculty, want our students to evaluate positively their Barton School experiences, both while enrolled in courses and afterwards.

Goals: To ensure that students completing Barton School programs possess skills that make them competitive with students from the best business programs in the region and to increase the quality and quantity of students.

Faculty: Faculty are the means by which the university creates a learning environment. The quality of the faculty and the opportunities provided to faculty for continuous improvement are of paramount importance to the success of the Barton School.

Goal: To have faculty who are widely recognized for their commitment to students and scholarship.

Programs: The programs offered by the Barton School link it to its multiple constituencies. The rich diversity of these programs reflects the university's unique urban mission.

Goal: To increase the recognition of the Barton School through relevant, competitive, and up-to-date programs.

The school is accredited by AACSB-International—The Association to Advance Collegiate Schools of Business.

Graduate degree programs in the school lead to the Master of Business Administration (MBA), Executive Master of Business Administration (EMBA), Master of Accountancy (MACC), and the Master of Arts (MA) in economics, and graduate certificates in enterprise systems and supply chain management, and entrepreneurship and innovation.

Certificates Offered
Enterprise Systems and Supply Chain Management
This certificate is aimed at equipping students with a knowledge of key enterprise-level information technology systems and supply chain practices used by companies around the world.
The courses are structured to provide extensive conceptual and applied information about enterprise-level systems and supply chain management. The curriculum is jointly offered by the decision sciences and MIS faculty in the School of Business and the industrial engineering faculty in the College of Engineering. Program prerequisites: DS 850 or IME 553, or equivalent. This program requires satisfactory completion of 9 hours of required courses and 3 hours of elective courses (a total of 12 credit hours).

Required Courses:
- DS 860 Enterprise Resource Planning
- IME 825 Enterprise Engineering
- DS 865 or IME 783 Supply Chain/Engr. Mgmt.

Elective Courses:
- DS 665 or IME 664 Project Management
- MIS 690 Topics Course—Configuration
- IME 764 Systems Engineering & Analysis
- MIS 884 Database Planning & Mgmt

**Entrepreneurship & Innovation**

This certificate is aimed at providing students the knowledge base in entrepreneurship to undertake moving technological expertise or high potential business ideas through the startup of high-growth businesses. The courses are designed to provide extensive conceptual and applied knowledge and expertise to students interested in entrepreneurship. This program requires the completion of 3 hours of required coursework (ENTR 868) and 9 hours of elective courses. Ideally, ENTR 868 will be taken as the last course in the four-course sequence. There are no prerequisite courses for the certificate program.

Required course:
- ENTR 868 Business Plan Development

Electives:
- ENTR 620 Growing and Managing an Entrepreneurial Firm
- ENTR 805 Technology Entrepreneurship
- ENTR 806 Seminar in New Product and Technology Development
- ENTR 855 Entrepreneurial Finance Seminar
- ENTR 869 Corporate Entrepreneurship
- ENTR 690 Special Topics in Entrepreneurship or ENTR 890 Seminar in Special Topics

**Master of Accountancy**

The Master of Accountancy (MACC) program at Wichita State University is designed to prepare qualified candidates for careers as professional accountants in public practice, industry, government, and nonprofit organizations. The program is based on strong preparation in general education courses with special emphasis on communication skills, and includes a broad exposure to the different aspects of business and management.

The School of Accountancy recognizes students may desire differing technical requirements to enter a diverse work environment. Two specialized concentrations are offered to complement the traditional emphasis: Accounting Information Systems (AIS) and Taxation.

The program requires a minimum of five years of full-time collegiate study, when beginning as a freshman. Students who decide to enter the program later in their academic careers should consult with the graduate coordinator of the School of Accountancy to learn the approximate length of time it would take to earn the degree. For example, if a student's bachelor's degree is in accounting, then that student would have one more year of full-time study to obtain the MACC degree.

**Admission Requirements**

Full admission to the MACC professional curriculum requires:
1. Satisfactory completion of the undergraduate accounting/business curriculum described below from an appropriately accredited university (or be within 12 hours of completion);
2. A minimum overall grade point average of 3.200;
3. A minimum grade of B (3.000) or better on all accounting courses; and
4. A satisfactory GMAT score. A satisfactory GMAT score is considered to be in the 25th percentile or higher for each section, and for the overall score. The GMAT must have been taken within the last six years.

Should a potential applicant not have an undergraduate degree in accounting, substantial undergraduate-level coursework in accounting and/or business will be required to be completed (or be within 12 hours of completion) prior to applying for admission. International applicants may also be required to complete substantial undergraduate-level coursework in accounting and/or business. All students are required to meet with the School of Accountancy's graduate adviser prior to beginning coursework.

**Degree Requirements**

**Students Possessing a Bachelor's Degree at Time of Admission**

Total degree requirements for students granted admission after completion of a bachelor's degree will vary and depend upon the specific course content of the undergraduate degree program. At a minimum, the candidate's program must total 30 graduate-level credit hours beyond the bachelor's degree, including 15 credit hours of accounting courses numbered 800 or above and a total of 21 credit hours in courses numbered 800 or above.*

In general, an undergraduate degree in business and an accounting major, equivalent to that offered at WSU is presumed. The following courses, or their graduate equivalents, must be included as part of the MACC degree program if not covered in the student's bachelor's degree:

**Undergraduate Accounting/Business Curriculum**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT 210 Financial Accounting</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 220 Managerial Accounting</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 10 Financial Accounting and Reporting: Assets</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 320 Accounting for Decision Making and Control</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 410 Financial Accounting and Reporting: Equities</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 430 Introduction to Federal Income Tax</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 560 Accounting Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 610 Financial Accounting and Reporting: Special Entities and Complex Issues</td>
<td>3–6</td>
</tr>
<tr>
<td>ACCT 620 Accounting for Strategic Support and Performance Evaluation</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 630 Taxation of Business Entities</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 640 Principles of Auditing</td>
<td>3</td>
</tr>
<tr>
<td>BADM 160 Business Software</td>
<td>3</td>
</tr>
<tr>
<td>BLAW 431 Legal Environment of Business, or BLAW 635 Law of Commercial Transactions</td>
<td>3</td>
</tr>
<tr>
<td>BLAW 636 Law of Business Associations</td>
<td>3–6</td>
</tr>
<tr>
<td>DS 350 Introduction to Production &amp; Operations Management</td>
<td>3</td>
</tr>
<tr>
<td>MIS 395 Management Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>ECON 201 Principles of Macroeconomics</td>
<td>3</td>
</tr>
<tr>
<td>ECON 202 Principles of Microeconomics</td>
<td>3</td>
</tr>
<tr>
<td>ECON 231 Intro. Business Statistics</td>
<td>3</td>
</tr>
<tr>
<td>FIN 340 Financial Management</td>
<td>3</td>
</tr>
<tr>
<td>MGMT 360 Principles of Management</td>
<td>3</td>
</tr>
<tr>
<td>IB 333 International Business</td>
<td>3</td>
</tr>
<tr>
<td>MGMT 681 Strategic Management</td>
<td>3</td>
</tr>
<tr>
<td>MKT 300 Marketing</td>
<td>3</td>
</tr>
<tr>
<td>MATH 111 College Algebra</td>
<td>3</td>
</tr>
<tr>
<td>MATH 144 Business Calculus</td>
<td>3</td>
</tr>
</tbody>
</table>

**Master of Accountancy Curriculum**

The following graduate-level coursework must be completed for a traditional MACC degree:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT 815 Financial Accounting and Reporting Contemporary Issues</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 825 Management Control Systems</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 835 Tax Research and Selected Topics</td>
<td>3</td>
</tr>
</tbody>
</table>
ACCT 840  Advanced Auditing .................3
ACCT 860  Advanced Accounting
         Information Systems .................3
Graduate electives outside accounting* .................9
Other graduate electives (accounting or non-accounting) * .................6
Note: all electives must be taken from within the Barton School of Business.

Concentrations in Master of Accountancy Degree Program

Accounting Information Systems
Students electing a concentration in accounting information systems (AIS) must take the following courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting core courses</td>
<td>15</td>
</tr>
<tr>
<td>ACCT 830  Taxation of Business Entities—Advanced Topics</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 831  Taxation of Estates and Gifts</td>
<td>3</td>
</tr>
</tbody>
</table>

Graduate electives, all outside of accounting* .................9
Note: all electives must be taken from within the Barton School of Business.

Taxation
Students electing a concentration in taxation must take the following courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting core courses</td>
<td>15</td>
</tr>
<tr>
<td>ACCT 830  Taxation of Business Entities—Advanced Topics</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 831  Taxation of Estates and Gifts</td>
<td>3</td>
</tr>
</tbody>
</table>

Graduate electives, all outside of accounting* .................9
Note: all electives must be taken from within the Barton School of Business.

Admission Requirements

Admission to the MBA program is granted to students who show high promise of success in postgraduate business study and who hold bachelor’s degrees from regionally accredited institutions.

Previous academic training in business is not required for admission to the MBA program. Students may have backgrounds in such diverse fields as engineering, liberal arts, education, and health related areas. The specific content of a student's previous education is less important than the evidence that the student has sound scholarship, strong personal motivation, and the ability to develop the skills necessary to assume positions of leadership.

Admissions decisions are based on the following:

1. Graduate Management Admission Test (GMAT) scores—overall score and component (i.e., verbal, quantitative, and analytical writing) scores are evaluated. The GMAT must have been taken within the last six years;
2. Personal Goals essay that clearly articulates the applicant's reasons for seeking admission (500 words maximum);
3. Two reference forms completed by faculty, employer, or suitable referee; and
4. Current resume (career-based work experience is desirable but not required).

Final admission of qualified applicants may be based on space available in the MBA program.

International students also are required to have a minimum score of 570 (paper-based), 230 (computer-based), or 88 (Internet-based) on the Test of English as a Foreign Language, or an overall band score of 7.0 on the IELTS.

Applications for degree admission are reviewed twice a year, in the fall and spring. Deadlines for submitting applications to the Graduate School are July 1 for consideration for fall admission and December 1 for spring admission. International applicants living outside the United States must submit their applications by April 1 for fall admission consideration and August 1 for spring admission consideration. Applicants who apply after these deadlines are considered in the order in which their completed application materials are received.

Degree Requirements

Advanced Standing:

Students with strong backgrounds in mathematics and business administration may be granted advanced standing in the MBA program through equivalent credit for background fundamental courses for which a minimum grade of C was received in an undergraduate or graduate program. Most students entitled to such credit hold bachelor's degrees in business administration from accredited institutions.

Students may be granted equivalent credit for any or all of the preparatory courses, depending on the depth of their undergraduate or previous graduate preparation. The MBA program may consist of as few as 36 hours for students who have no deficiencies in prerequisites and who receive equivalent credit for all of the background fundamentals.

Students Not Receiving Advanced Standing:

Students with bachelor's degrees in non-business fields usually will not have backgrounds warranting the granting of advanced standing through equivalency credit. There are some exceptions. Some students, for example, may have had enough coursework in economics or statistics to be granted credit for these courses. Determination regarding equivalency credit will be made following admission to the program.

MBA Course Requirements

*Prerequisite: MATH 144 Business Calculus .................3
ECON 231 Intro. Business Statistics .................3

**Preparatory Courses

MBA 800  Financial Statement Analysis .................3
MBA 801  MBA Basics: Management and Marketing .................3
ECON 800  Analysis of Economic Theory .................3

Required Courses

ACCT 801  Managerial Accounting .................3
ECON 804  Managerial Economics .................3
FIN 850  Managerial Finance .................3
MGMT 803  Business Decision Making and Analysis or
MKT 803  Marketing Analysis (taken within first two semesters of admission) .................3
MKT 801  Marketing Management .................3
MGMT 862  Organizational Behavior .................3
MGMT 885  Adv. Strategic Management (taken during last semester) .................3
DS 850  Operations Management .................3
Policies
1. All incoming MBA students must attend an orientation session, which includes an introduction to the philosophy of graduate business education, development of networking skills, discussions about the history of the Barton School and the MBA program, and an overview of success strategies for MBA students. Only after completion of the orientation is a student considered for full standing in the MBA program.

2. A candidate’s individual plan of study must be approved by the director or assistant director and submitted to the Graduate School for final approval. This plan must be filed within a month of the completion of 12 hours of graduate work.

3. All candidates must complete 30 hours of 800-level courses including: ACCT 801, DS 850, ECON 804, FIN 850, MGMT 803 or MKT 803, MGMT 862, MGMT 885, MKT 801, MIS 874, and 3 hours of electives. The additional 6 hours of electives may be at either the 800 level or the 600 level.

Concentrations in Master of Business Administration Degree Program
The MBA degree program is a general management degree equipping students with an understanding of organizations as integrated systems. Within the program the curriculum provides knowledge across organizational functions. Students may continue this generalist approach by choosing courses across a broad spectrum of offerings to complete the elective component of the curriculum. Some students may wish to focus their elective coursework in a specific area of study to enhance their general organizational knowledge base by selecting a concentration from the following options provided in the MBA program.

MBA—Technology and Operations Management
The Technology and Operations Management (TOM) concentration provides the opportunity to gain expertise in the area of managing manufacturing and service systems. The concentration focuses on various decision-making frameworks in contemporary environments where operations and technology are strategic advantages. It emphasizes the strategic and tactical management of a firm’s supply chain, enterprise system, quality, business processes, and project planning/control through the use of technology-intensive tools. The concentration prepares MBA students to meet challenging responsibilities as front-line manufacturing and service managers, project managers, system analysts, supply chain managers, and other rewarding positions in today’s contemporary organization.

Students selecting this concentration will need three electives from list A or two electives from list A and one from list B.

List A:
- DS 655 Project Management
- DS 675 Spreadsheet Mod. for Decision Making
- DS 860 Enterprise Resource Planning
- DS 865 Supply Chain Management (or IME 783)

List B:
- DS 876 Adv. Management Science
- DS 890 Special Topics
- MIS 650 Knowledge Management
- MIS 884 Database Planning Mgmt.

Courses may not be taken for credit toward the concentration or the degree if an equivalent 600-level course has been taken as part of an undergraduate degree.

MBA—Entrepreneurship & Innovation
The MBA—entrepreneurship and innovation concentration provides the foundation for developing one’s own business, moving into a leadership role in a family business, or managing innovation and new business formation in a corporate setting. Building on the MBA curriculum, the entrepreneurship concentration enhances the ability to cope with the full range of issues in evaluating markets; developing business ideas, new product, and process innovation, commercializing technologies, and writing business plans. The specialized knowledge helps students understand the business startup process and related managerial issues.

The entrepreneurship concentration requires 9 credit hours of coursework from the following list of courses.

Course requirements for the MBA concentration in entrepreneurship (9 hours):
- ENTR 620 Growing and Managing an Entrepreneurial Firm
- ENTR 668 Developing a Successful Business Plan
- ENTR 805 Technology Entrepreneurship
- ENTR 806 New Product & Technology Dev.
- ENTR 855 Entrepreneurial Finance Seminar
- ENTR 868 Business Plan Development

MBA—Finance
The MBA—finance concentration prepares students for a career in corporate finance, the investments field, or with financial institutions. The specialized knowledge provides the necessary foundation for understanding organizational financial management issues. The curriculum blends theory with applied business practice to prepare students for the varied activities involved in financial management. Students also gain experience with many different financial analysis tools that facilitate problem solving. Most advanced courses involve cases or projects requiring computer modeling and analysis.

The finance concentration requires 9 credit hours of coursework from a specified list of courses. FIN 850, Managerial Finance, must be taken prior to or concurrent with courses that comprise the concentration. Students may take no more than two 600- or 700-level courses.

Course requirements for the concentration in finance:

**Required**
- FIN 620 Investments
- FIN 821 Investment Analysis & Portfolio Management
- FIN 822 Futures and Options Markets
- FIN 823 Risk Management with Options and Futures
- ECON 847 Speculative Markets
- FIN 625 International Financial Management
- ECON 674 International Finance
- FIN 632 Bank and Financial Institution Management
- FIN 830 Mgmt. of Financial Institutions
- FIN 650/870 Financial Modeling
- FIN 810 Short-Term Financial Management

MBA—Health Care Administration
The MBA—health care administration concentration offers the opportunity to study business administration at the graduate level with particular emphasis on health care management. Building on the MBA curriculum, this concentration provides understanding and knowledge of the issues facing organizations in the health services industry. The specialized knowledge will help students cope with managerial processes in the dynamic health care industry.

The health care administration concentration requires 9 credit hours of coursework from a specified list of courses.

**Required**
- ECON 674 International Finance
- FIN 632 Bank and Financial Institution Management
- FIN 830 Mgmt. of Financial Institutions
- FIN 650/870 Financial Modeling
- FIN 810 Short-Term Financial Management
Course requirements for the concentration in health care administration:

Elected
HMCD 642 Financing Health Care Services
HMCD 643 Intro. to Geographic Info. Systems
PHS 812 Health Care Policy and Administration
PHS 814 Social and Behavioral Aspects of Public Health
PHS 826 Policies of Health Policy Making
PHS 831 Essentials of Health Insurance and Managed Care
PHS 841 Leadership and Change Agency in Public Health
PHS 858 Long-Term Care Systems

MBA—Marketing
The MBA—marketing concentration prepares students for a career in general marketing, marketing management, marketing research, and services marketing. The curriculum focuses on fundamental marketing concepts, current marketing practices, and emerging marketing techniques. The specialized knowledge provides the necessary foundation for a solid understanding of the marketing function for organizational success.

The marketing concentration requires 9 credit hours of elective coursework from a specified list of courses. MKT 801, Marketing Management, must be taken prior to or concurrent with courses comprising the concentration. Students may take no more than two 600- or 700-level courses.

Course requirements for the concentration in marketing:

Elected
MKT 601/IB 601 International Marketing
MKT 607 Promotion Management
MKT 608/ENTR 608, Selling and Sales Force Management
MKT 690E Principles of Online Marketing
MKT 805 Consumer Decision Processes
ENTR 869 Corporate Entrepreneurship
COMM 865 Organizational Communication

Executive Master of Business Administration
The Executive Master of Business Administration degree program is developed exclusively for high-potential professionals. The program focuses on the needs of professionals as well as the demands of the globally-competitive business community.

The Executive MBA program curriculum includes insights into human behavior, proven analytical tools, strategic operational and financial management, innovative marketing concepts, and the latest in competitive technology. The program is administered through Barton School of Business faculty in the accounting; economics; finance, real estate, and decision sciences; management; and marketing departments.

The Executive MBA program is completed in 20 months and requires completion of 36 credit hours of coursework. Classes meet primarily on Saturdays.

Admission Requirements
Admission to the Executive MBA is granted to students who hold mid- or upper-level professional positions in businesses and nonprofit organizations. All students must hold a bachelor's degree from a regionally accredited institution. Previous academic training in business is not required for admission to the Executive MBA program.

Although various criteria are considered in granting admission, special attention is given to the applicant's work experience, potential for advancement in their organization, and demonstrated potential to excel in graduate coursework in business. All applicants are required to submit application materials including letters of recommendation and personal essays, and to complete a personal interview with Barton School faculty and/or administrative staff.

International students are required to have a minimum score of 570 (paper-based) or 230 (computer-based) on the Test of English as a Foreign Language.

Degree Requirements
All students must complete 36 hours of coursework. Students progress through the program as a group.

Executive MBA Course Requirements

<table>
<thead>
<tr>
<th>Courses</th>
<th>Hrs.</th>
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<tbody>
<tr>
<td>EMBA 800 Quantitative Decision Methods for Executives</td>
<td>2.5</td>
</tr>
<tr>
<td>EMBA 801 Human Behavior and the Mgmt. of Organizations</td>
<td>2.5</td>
</tr>
<tr>
<td>EMBA 802 Marketing for Executive Management</td>
<td>2.5</td>
</tr>
<tr>
<td>EMBA 803 Economic Analysis for Executive Management</td>
<td>2.5</td>
</tr>
<tr>
<td>EMBA 804 Operations Management for Executives</td>
<td>2.5</td>
</tr>
<tr>
<td>EMBA 805 Global Business and Competitiveness for Executives</td>
<td>2.5</td>
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<tr>
<td>EMBA 806 Financial Statement Analysis for Executive Management</td>
<td>2.5</td>
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<tr>
<td>EMBA 807 Corporate Finance for Executive Management</td>
<td>2.5</td>
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<tr>
<td>EMBA 808 Managerial Accounting for Executives</td>
<td>2.5</td>
</tr>
<tr>
<td>EMBA 809 Information Technology for Executives</td>
<td>2.5</td>
</tr>
<tr>
<td>EMBA 810 Organizational Investment Strategies for Executives</td>
<td>2.5</td>
</tr>
<tr>
<td>EMBA 811 Competitive Strategy for Executive Management</td>
<td>2.5</td>
</tr>
<tr>
<td>EMBA 890 Executive Seminar in Special Topics</td>
<td>6.0</td>
</tr>
</tbody>
</table>

Master of Arts in Economics
The department of economics presents a curriculum leading to the Master of Arts (MA) degree. Courses of study allow emphasis in one of three tracks: economic analysis, financial economics, or international economics. All three seek to provide students with analytical skills useful in decision making and a broader understanding of the overall economic environment. Options provide as much flexibility as is compatible with the student's background and career interests.

The economic analysis sub-specialty is particularly suitable for students who wish to continue their studies in economics at the doctoral level. Financial economics includes coursework in financial management and areas related to money and capital markets, monetary policy, and financial and monetary institutions. It is particularly suited to those seeking employment in the financial sector. International economics is geared to those with an interest in the international economy, both from a business and policy perspective.

Admission Criteria

1. Academic four-year undergraduate degree from a regionally accredited institution.
2. Admission based primarily on grade point average (GPA) and background in economics.
3. Admission to full standing requires a GPA of 2.750 for the last 60 hours of coursework and all courses in economics and required mathematics.
4. Must have completed intermediate level macro- and microeconomics, plus one course in calculus and one in statistics, all with a grade of C+ (2.300) or better. Six hours of any course deficiencies can be made up during the first year.
5. The Graduate Record Examination (GRE) is not required.
6. Non-native speakers of English must have received 550 on the paper-based, 213 on the computer-based, or 79 on the Internet-based Test of English as a Foreign Language (TOEFL); or have an overall band score of 6.5 on the IELTS; or have attended another U.S. university as a full-time student enrolled in
academic courses for a minimum of one year; or have earned a bachelor's degree (or higher) from a U.S. university within two years of their proposed semester of admission.

**Degree Requirements**

All three tracks require either a thesis (30 credit hours) or an independent research project and an additional course in the student's area of interest (33 credit hours). The MA degree in economics is typically completed in four semesters, although completion in three semesters is not unusual. The graduate coordinator or the department chairperson must approve the candidate's plan of study. All plans of study must include at least 18 hours of graduate-level courses in economics or courses approved by the graduate coordinator. Courses identified as background fundamentals of the MBA program and other courses designated by the economics department may not be included in the hours required for the degree.

**Courses**

- **ECON 702** Mathematical Methods in Economics
- **ECON 731** Applied Econometrics I
- **ECON 801** Macroeconomic Analysis
- **ECON 802** Microeconomic Analysis or
  - **ECON 804** Managerial Economics (option not available in economic analysis track)
- **ECON 803** Analysis of Business Conditions and Forecasting or
- **ECON 831** Applied Econometrics II

In all tracks, at least 70 percent of credit hours must be at the 700–800 level.

**Economic Analysis Track**

In addition to the core, a student must take either:

- Five additional courses in economics or related areas and a 3-hour research project (18 credit hours) or
- Four additional courses in economics or related areas and 3 hours of thesis (15 credit hours).

**Financial Economics Track**

- **FIN 850** Managerial Finance
- **ECON 740** Monetary Problems & Policy

Three additional courses in economics or finance and a 3-hour research project (12 credit hours) or two additional courses in economics or finance and 3 hours of thesis (9 credit hours).

**International Economics Track**

- **ECON 672** International Economics and Business
- **ECON 674** International Finance (cross-listed as FIN 625)
- **ECON 870** International Finance and Investment

Two additional economics/international related courses (such as International Management) and a 3-hour research project (9 credit hours) or one additional economics/international course and 3 hours of thesis (6 credit hours).

**Accounting (ACCT)**

**School of Accountancy**

**Courses for Graduate/Undergraduate Credit**

- **ACCT 560. Accounting Information Systems (3).**
  - A study of the content, design, and controls of accounting systems, emphasizing the use of computers for processing financial data. Prerequisites: completion of ACCT 220, 310, and BADM 160, all with a grade of C (2.000) or better, advanced standing, junior standing.

- **ACCT 610. Financial Accounting and Reporting: Special Entities and Complex Issues (3).**
  - Examines accounting concepts and techniques related to consolidated statements, governmental and not-for-profit entities, and partnerships. Includes accounting for foreign currency, hedges, financial instruments, and emerging issues in financial accounting and reporting. Prerequisites: completion of ACCT 410 with a grade of C (2.000) or better, advanced standing, junior standing.

- **ACCT 620. Accounting for Strategic Support and Performance Evaluation (3).**
  - The use of accounting information to assist management in developing and identifying superior strategies to produce and sustain comparative and/or competitive advantages. Focuses on goal-congruent strategies and incentives. Prerequisites: completion of ACCT 320 with a grade of C (2.000) or better, advanced standing, junior standing.

- **ACCT 630. Taxation of Business Entities (3).**
  - Studies the federal tax law as it applies to corporations, partnerships, and other business entities. Examines the effect of taxation on business decisions. Prerequisites: completion of ACCT 430 with a grade of C (2.000) or better, advanced standing, junior standing.

- **ACCT 640. Principles of Auditing (3).**
  - A study of the auditor's attest function, emphasizing auditing standards and procedures, independence, legal responsibilities, codes of ethical conduct, and evaluation of accounting systems and internal control. Prerequisites: completion of ACCT 410 and 560 with a grade of C (2.000) or better, advanced standing, junior standing.

- **ACCT 690. Seminar in Selected Topics (1–3).** Repeatable for credit with School of Accountancy consent. Prerequisite: junior standing, advanced standing.

- **ACCT 777. Review for Professional Examinations (1–6).** Prep course for professional certification examinations in accounting, including the CPA, CMA, and CIA. Prerequisites: permission of the School of Accountancy.

- **ACCT 781. Cooperative Education (1).** Provides the graduate student with a field placement which integrates theory with a planned and supervised professional experience. Program must be formulated in consultation with appropriate graduate faculty. May be repeated for credit up to 3 hours. May not be used to fulfill degree requirements. Offered Cr/NCr only.

**Courses for Graduate Students Only**

Where a course is indicated as a prerequisite to a second course, all prerequisites to the earlier course(s) also apply to the later course(s).

- **ACCT 801. Managerial Accounting (3).** Examines the use of accounting information to assist management in planning, analyzing, and implementing business decisions and activities. Focuses on strategic and operational performance analysis and evaluation. Prerequisites: graduate standing and MBA 800 or equivalent, or permission of the School of Accountancy. This course is not available for credit in the Master of Accountancy program.

- **ACCT 815. Financial Accounting and Reporting: Contemporary Issues (3).** Uses the case method and financial accounting databases to examine and analyze the application of generally accepted accounting principles to problems of measurement, presentation, and disclosure in financial statements. Focuses on contemporary topics of interest in financial accounting and reporting. Prerequisites: graduate standing and ACCT 610 or equivalent, or permission of the School of Accountancy.

- **ACCT 825. Management Control Systems (3).** Studies accounting in the context of management control systems. Focuses on how accounting interacts with management in achieving an organization's strategic and operational objectives. Emphasizes contemporary challenges in accounting, related to broadening the types of information captured, measured, and reported. Prerequisites: graduate standing and ACCT 620 or 801 (or equivalent), or permission of the School of Accountancy.

- **ACCT 830. Taxation of Business Entities—Advanced Topics (3).** Analyzes various advanced topics in the taxation of business planning. Focuses on the use of various entity forms to achieve optimal tax and business objectives. Also considers the tax consequences of conducting business internationally. Prerequisites: graduate standing and ACCT 630 or equivalent, or permission of the School of Accountancy.

- **ACCT 831. Taxation of Estates and Trusts (3).** Studies the income taxation of trusts and estates, including the special cases of grantor and split-interest trusts. Examines the gift taxation of donors, the estate taxation of deceased, and the fundamentals of estate planning. Prerequisites: graduate standing and ACCT 430 or equivalent, or permission of the School of Accountancy.

- **ACCT 835. Tax Research and Selected Topics (3).** An in-depth study of traditional and computerized tax
research and planning techniques, ethical issues, tax practice issues, and an introduction to state, multistate, and international taxation. Prerequisites: graduate standing and ACCT 630 (or equivalent), or permission of the School of Accountancy.

ACCT 840. Advanced Auditing (3). An advanced study of auditing emphasizing auditing computerized systems, statistical sampling, and ethics. Prerequisites: graduate standing and ACCT 410 and 640 (or equivalent), or permission of the School of Accountancy.

ACCT 860. Advanced Accounting Information Systems (3). A study of the concepts of information systems, their design and operation, and the relationship of these concepts to the economic information requirements, information flows, decision criteria, and control mechanisms in the business organization. Prerequisites: graduate standing and ACCT 860 (or equivalent), or permission of the School of Accountancy.

ACCT 890. Seminar in Special Topics (1–3). Repeatable with permission of the School of Accountancy.

ACCT 891. Directed Study in Accounting (1–3). Prerequisite: School of Accountancy consent.

ACCT 892. Internship in Accounting (3). Offered Cr/NCr only. Prerequisites: 3.000 GPA in accounting, graduate standing, and School of Accountancy consent.

Business Law (BLAW)

Department of Finance, Real Estate, & Decision Sciences

Courses for Graduate/Undergraduate Credit

BLAW 602. Legal Environment of International Business (3). Cross-listed as IB 602. Analysis of legal and regulatory issues affecting import-export transactions, licensing and technology transfer, and international sales of services. Prerequisite: IB 333, junior standing, advanced standing.


BLAW 636. Law of Business Associations (3). Law of agency, partnerships, and corporations. Considers the organizational and relational aspects of both small, closely held businesses and large corporate enterprises. Prerequisites: junior standing, advanced standing.

BLAW 690. Seminar in Selected Topics (1–5). Repeatable with departmental consent. Prerequisites: junior standing, advanced standing.

Courses for Graduate Students Only

BLAW 890. Seminar in Special Topics (1–3). Repeatable with departmental consent.

Decision Sciences (DS)

Department of Finance, Real Estate, & Decision Sciences

Courses for Graduate/Undergraduate Credit

DS 655. Project Management (3). This hands-on and project-based technology course establishes fundamental guidelines for defining the process of project management and designing time-constrained projects. Covers core methodology for managing complex projects on time. Uses a software tool. Prerequisites: DS 350 with a grade of C+ (2.300) or better, junior standing, advanced standing.

DS 660. Enterprise Systems (3). Introduces the underlying need for integration in organizations that have traditionally operated with fragmented information systems. The focus is on ERP (enterprise resource planning) systems, but other e-commerce systems are discussed. Includes an overview of ERP systems, business processes, and implementation issues. Covers relevant software packages. Not open to students with credit in DS 860. Prerequisites: DS 350 with a grade of C+ (2.300) or better, junior standing, advanced standing.

DS 665. Supply Chain Management (3). Emphasizing global integration and coordination, this introductory course delivers the basic concepts and decision making models critical to managing a global supply chain. Topics covered include supply chain design and operation, logistics strategies and network configuration, inventory management and risk pooling, the role of information technology in the supply chain, warehousing and material handling systems, supplier relations, and strategic alliances. Not open to students with credit in DS 865. Prerequisites: DS 350 with a grade of C+ (2.300) or better, junior standing, advanced standing.

DS 675. Spreadsheet Modeling for Decision Making (3). Cross-listed as FIN 675. Adopts a practical spreadsheet-based approach to the modeling of a wide variety of business problems. Concentrates on problem solving in an interdisciplinary context and developing spreadsheet skills. Not open to students with credit in DS 875 or FIN 675. Prerequisites: DS 350 and FIN 340 each with a grade of C+ (2.300) or better, junior standing, advanced standing.

DS 690. Seminar in Selected Topics (1–5). Repeatable with departmental consent. Prerequisites: DS 350 with a grade of C+ (2.300) or better, junior standing, advanced standing.

DS 750. Workshop in Decision Sciences (1–4). Prerequisite: junior standing.

Courses for Graduate Students Only

DS 850. Operations Management (3). Develops an understanding of the operations function in a business and how it interfaces with other major functions in business. Students gain an appreciation of the strategic importance of operations and how a firm can gain competitive advantage through world-class performance by operations in delivering high-quality, cost-competitive products and services. Builds a knowledge base of the concepts, tools, and techniques related to designing, managing, and improving operations. Helps managers, regardless of functional specialization, gain an operations perspective. Prerequisites: calculus and statistics.

DS 851. Advanced Operations Management (3). Advanced course in the conceptual and applied aspects of operations management in the manufacturing and non-manufacturing sectors, as well as on the Internet. The thrust of the course is on strategic issues, process analysis, and the role of technology in supporting operations. Students learn how software, like SAP if available, can perform operations management tasks. Case studies are used. Prerequisite: DS 850 or equivalent.

DS 860. ERP—Enterprise Resource Planning (3). Provides an overview of Enterprise Resource Planning (ERP) and related systems like CRM. E-commerce systems are designed to assist an organization with the integration and management of its business processes. ERP systems can be expensive and time-consuming to implement. Topcis covered include the ERP life cycle for implementation and change management. Students get hands-on exercises with ERP software, like SAP, if available. Prerequisite: DS 850 or equivalent.

DS 865. Supply Chain Management (3). Introduces concepts, models, and solution approaches critical to managing a supply chain. Focuses on understanding how supply chain design and operation impact the performance of the company and its competitive advantage. Topics include supply chain development, profitability, demand forecasting, inventory management, facility location, warehousing, transportation, network design, and information sharing. Prerequisite: DS 850 or instructor’s consent.

DS 875. Management Science (3). Overview of management science techniques that can be used to solve decision problems in different business functional areas (operations management, finance, marketing, and HR). Students gain analytical skills that make them better decision makers regardless of their area of specialization. Course is example-driven and spreadsheet-based. Prerequisite: DS 850 or equivalent.

DS 890. Seminar in Special Topics (1–3). Repeatable with departmental consent.

DS 891. Directed Studies (1–5). Prerequisite: departmental consent.

Economics (ECON)

Department of Economics

Courses for Graduate/Undergraduate Credit

ECON 570. International Political Economy (3). Cross-listed as POLS 570. Examination of policy decisions regarding exchanges of trade, money, and labor that span national boundaries. Studies the interaction of politics and economics at the international level, as well as the modern history of the global economy. Economists often studies the material benefits and costs of different policies. Political science asks why these policies exist in the first place with a focus on who gets the benefits, who pays the costs, and how decisions about allocating benefits and costs are made.

ECON 606. Experimental Economics (3). Laboratory experiments allow economists to stress-test economic theory in controlled conditions, use observed human
behavior to inform new theories, test alternative economic policies and design market mechanisms and institutions to address real-world problems. Students build an understanding of experimental economics through a survey of experimental literature, critical analysis of experimental research papers, participation in in-class experiments, and designing a research experiment of their own.

ECON 611. Economics of Sports (3). Inquiry into the economic aspects of professional and intercollegiate sports. Includes industrial organization of sports, public finance of sports, and the labor economics of sports, as well as the unique competitive nature of the sports enterprise. Not applicable toward the MA in economics. Prerequisite: junior standing.

ECON 616. Economic Thinking in an Organization (3). Students develop an understanding of the foundations of prosperity, along with competence in applying a basic toolkit of economic analysis to business situations. They use this knowledge to understand the analogs between a prosperous society and a value-creating organization.

ECON 625. Economic History of Europe (3). An analysis of the development of economic institutions; the rise of capitalism and its influence on overseas expansion, technology, precious metals, politics, and war; changes in economic ideologies; and cultural effects of economic change. Prerequisites: ECON 201 and junior standing.

ECON 627. Economic History of the United States (3). Cross-listed as HIST 515. Analysis of the basic factors in economic growth. Explores agriculture, trade, and commerce; industrial development; and the changing role of the government in economic activity. Prerequisites: ECON 201 and junior standing.

ECON 660. Labor Economics (3). Introduction to labor economics surveying both theoretical and empirical research in this field. Includes labor markets, wage determination, and human capital theory. Prerequisites: for undergraduate students, ECON 201, 202, and junior standing; for graduate students, the equivalent of ECON 201 and 202.

ECON 663. Economic Insecurity (3). Cross-listed as GERO 663. Personal economic insecurity, such as unemployment, old age, health care, disability, and erratic economic fluctuations. Includes costs and benefits of government action to aid in meeting such insecurities. Prerequisites: for undergraduate students, ECON 201, 202, and junior standing; for graduate students, the equivalent of ECON 201 and 202.

ECON 672. International Economics and Business (3). Cross-listed as IB 561. A survey of the economic foundations of international trade, finance, and investment. Includes foreign exchange markets, regional integration, trade theories and instruments, U.S. trade policies and treaties, multinational companies, immigration, as well as differences in cultural, political, and economic systems. Includes current events. Prerequisites: for undergraduate students, ECON 201, 202, and junior standing; for graduate students, the equivalent of ECON 201 and 202.

ECON 674. International Finance (3). Cross-listed as FIN 625 and IB 625. A study of the international financial and monetary system, emphasizing currency markets. Examines market instruments and techniques, including synthetic and derivative securities and their application to management of currency risk in international trade and finance. Prerequisites: for undergraduate students, ECON 201, 202, FIN 340 with a grade of C+ (2.300) or better, and junior standing; for graduate students, the equivalent of ECON 201 and 202.

ECON 688. Urban Economics (3). Cross-listed as PADM 688. A survey of the economic structure and problems of urban areas on both the microeconomic and macroeconomic levels. Stresses the application of regional economic analysis in the study of urban areas as economic regions. Prerequisites: for undergraduate students, ECON 201, 202, and junior standing; for graduate students, the equivalent of ECON 201 and 202.

ECON 692. Group Studies in Economics (1–3). Repeatable for credit with departmental consent. Prerequisites: for undergraduate students, ECON 201, 202, and junior standing; for graduate students, the equivalent of ECON 201 and 202.

ECON 702. Mathematical Methods in Economics (3). Introduces mathematical tools that are especially useful in economics, econometrics, and finance. Includes a review of differential and integral calculus, an introduction to matrix algebra, and various constrained optimization and economic modeling techniques. Emphasizes economic applications and modeling. Prerequisites: for undergraduate students, ECON 201, 202, and junior standing; for graduate students, the equivalent of ECON 201 and 202.

ECON 731. Applied Econometrics I (3). Studies regression techniques through business, finance, and economics examples. Reviews the fundamentals of statistics and covers practical model building, data collection, use of statistical software packages, interpretation of regression results, and various diagnostic tests. Prerequisites: for undergraduate students, ECON 201, 202, and junior standing; for graduate students, the equivalent of ECON 201 and 202.

ECON 740. Monetary Problems and Policy (3). An examination of historical and contemporary monetary issues in the context of the global economy. Prerequisites: ECON 340, junior standing.

ECON 750. Workshop in Economics (1–3). Prerequisites: for undergraduate students, ECON 201, 202, and junior standing; for graduate students, the equivalent of ECON 201 and 202.

ECON 765. Public Sector Economics (3). Cross-listed as PADM 765. An analysis of fiscal institutions and decision making in the public sector of the American economy, budget planning and execution, taxation, debt, and fiscal policy. Prerequisites: for undergraduate students, ECON 201, 202, and junior standing; for graduate students, the equivalent of ECON 201 and 202.

ECON 781. Cooperative Education (1). Provides the graduate student with a field placement which integrates theory with a planned and supervised professional experience. Programs must be formulated in consultation with appropriate graduate faculty. May be repeated for credit up to 3 hours. May not be used to fulfill degree requirements. Offered CR/NC only.

Courses for Graduate Students Only

ECON 800. Analysis of Economic Theory (3). An intensive analysis of micro- and macroeconomic principles. Not for graduate credit in the MA program in economics. Prerequisite: departmental consent.


ECON 802. Microeconomic Analysis (3). An analysis of the consumer, the firm, and competitive and noncompetitive markets using mathematical models. Prerequisite: ECON 302 and 702.

ECON 803. Analysis of Business Conditions and Forecasting (3). Intensive study of research methodologies and forecasting for real life business decision making. Covers formulation of research questions, specification of models, collection of time series and survey data, applications of forecasting techniques, and interpretation and communication of the results. Prerequisites: ECON 731 or instructor's consent.

ECON 804. Managerial Economics (3). A survey of theoretical and analytical tools of economics that are useful in decision making by managers. Prerequisites: ECON 201, 202, or 800; one course in statistics; one course in calculus.

ECON 831. Applied Econometrics II (3). Introduces the maximum likelihood estimation and the methods of moments estimation technique. Covers SUR, panel data, simultaneous equations, VAR, and ARCH/GARCH models. Emphasizes the time series model building practiced in finance and macroeconomics. Prerequisites: ECON 731 and 702 or equivalent.

ECON 840. Seminar in Monetary Theory (3). An examination of neoclassical and contemporary monetary theories. Includes an analysis and an evaluation of current monetary problems. Repeatable for credit with departmental consent. Prerequisite: ECON 202 and 340.

ECON 847. Speculative Markets (3). Cross-listed as FIN 823. Analysis of the markets for speculative securities such as futures, options, and commodities. Evaluates underlying theories explaining speculative markets in which such securities are traded. Discusses trading strategies such as hedging and arbitrage. Prerequisite: MBA 800 or equivalent.

ECON 865. State and Local Government Finance (3). Cross-listed as POLS 865 and PADM 865. An analysis of state and local government expenditure and revenue systems, with an introduction to state and local financial administration. Prerequisite: ECON 765 or instructor's consent.

Includes foreign exchange markets, European integration, international trade organizations and monetary systems, and emerging markets. Prerequisite: one of the following courses: ECON 731 and 672 (IB 561), or ECON 674 (FIN 625).

COURSES FOR GRADUATE STUDENTS ONLY

ENTR 690. Special Topics in Entrepreneurship (3).
Advanced course with in-depth study of emerging topics in entrepreneurship. Repeatable with instructor's consent. Prerequisites: ENTR 310, junior standing or instructor's consent, advanced standing.

ENTR 750. Workshop in Entrepreneurship (1–4).
Prerequisite: junior standing.

COURSES FOR GRADUATE STUDENTS ONLY

ENTR 605. Technology Entrepreneurship (3).
Exploration of issues surrounding the transformation of knowledge into commercially useful products, services, or viable businesses. Students are immersed in the process of moving technology from the laboratory to the marketplace using active technologies from the university, community, or national research laboratories. Students gain familiarity with concepts in the commercialization process and receive hands-on experience applying the concepts to current intellectual property, technology, and inventions. Market validation, opportunity recognition, intellectual property protection (patents, copyright, trade secrets), and valuation are central issues to which students are exposed and which they employ in the commercial-potential evaluation process. Students apply conceptual tools to the assessment of intellectual property for its potential to be licensed to existing organizations or as the basis of new venture formation. Prerequisite: junior standing.

ENTR 668. Developing a Successful Business Plan (3).
Examines the development of a comprehensive business plan that incorporates strategic and organizational principles associated with entrepreneurial finance and new product and technology commercialization. Concepts are introduced that improve and accelerate the commercialization process, from decisions made to exiting and harvesting the business. Prerequisites: ENTR 440, 455, junior standing, advanced standing.

ENTR 806. Seminar in New Product and Technology Development (3).
Cross-listed as MKT 806. The innovative transformation of knowledge into commercial products and services. Teams of students assess real technologies for the concepts in a hands-on experience applying them to commercialization process, from decisions made to exiting and harvesting the business. Prerequisites: ENTR 440, 455, junior standing, advanced standing.

ENTR 855. Entrepreneurial Finance Seminar (3).
Looks in depth at the financial side of starting, maintaining, and (perhaps) ultimately, exiting a small and/or new business venture. Begins with an overview of the entrepreneurial process, highlighting the importance of finance in the many facets of running a business. Topics include: the measure and evaluation of financial performance; consideration of the various sources of capital available to companies; valuation of business ventures and associated securities laws; venture capital; and the options available for exiting a business.

ENTR 869. Corporate Entrepreneurship (3).
Addresses trends, current status, and success factors in the area of innovation and entrepreneurship within organizations. Examines principles applicable to any organization, large or small, private or public, by those people who wish to create change and innovate within the existing structure. Covers (1) foundations of entrepreneurship; (2) barriers to change; (3) entrepreneurial characteristics of individuals; (4) creative thinking and forced ideation methods; (5) corporate entrepreneurship—the need for it, definition, methods, favorable environment, and rewards; (6) examples of corporate entrepreneurship; (7) entrepreneurial strategies, policies, and practices for organizations; and (8) the entrepreneurial society, a growing way of life.

ENTR 890. Seminar in Special Topics (1–3).
Repeatable with instructor's consent.

ENTR 891. Directed Studies (1–5).
Prerequisite: instructor's consent.

EXECUTIVE MASTER OF BUSINESS ADMINISTRATION (EMBA)

GRADUATE STUDIES IN BUSINESS

COURSES FOR GRADUATE STUDENTS ONLY

EMBA 800. Quantitative Decision Methods for Executives (2.5).
Introduces methods of statistical
Executive Management (2.5).

EMBA 806. Financial Statement Analysis for Executives (2.5). Focuses on information as a resource and the links between business strategy and information technology, the organizational implications of technology, and how to successfully incorporate information technology into organizations to support management decision making and control. Prerequisite: admission to EMBA program.

EMBA 801. Human Behavior and the Management of Organizations (2.5). Examines leadership styles, power, authority, motivations, communications, and their impact on human behavior. Includes organizational learning, team building, participative management, transformational leadership, managing diversity, conflict management, network organizations, organizational change, and re-engineering. Prerequisite: admission to EMBA program.

EMBA 802. Marketing for Executive Management (2.5). Focuses on the analysis, planning, and implementation of marketing strategies from middle- and upper-management perspectives. Introduces key concepts and methods for the development of integrated marketing programs. Prerequisite: admission to EMBA program.

EMBA 803. Economic Analysis for Executive Management (2.5). Focuses on the elements of economics that are most useful for middle- and upper-level managers. Covers the internal operations of the firm (cost structures and internal organization), the micro environment of the firm (market structures, pricing policies, antitrust and other government regulations), and the macro environment (sources and predictions of economic statistics, government macroeconomic policies, international economics). Prerequisite: admission to EMBA program.

EMBA 804. Operations Management for Executives (2.5). Focuses on the processes by which goods and services are supplied, produced, and distributed in organizations. Emphasizes systems for analyzing design and operational problems in the production/operations function. Prerequisite: admission to EMBA program.

EMBA 805. Global Business and Competitiveness for Executives (2.5). Focuses on applications of economic analysis to international business decisions, international and macroeconomic components, understanding the implications of macro policies and developments for the firm’s business environment, expansions into foreign markets, foreign investment and the relevance of global changes in technology and labor productivity, and foreign exchange, balance of payments, and trade policy issues. Prerequisite: admission to EMBA program.

EMBA 806. Financial Statement Analysis for Executive Management (2.5). Focuses on the nature and purpose of accounting, principal accounting instruments, and valuation problems. Prerequisite: admission to EMBA program.

EMBA 807. Corporate Finance for Executive Management (2.5). Focuses on the strategic decision that an organization makes leading to capital spending. Also includes the risk element in financial decision making and the financial instruments that have evolved to reallocate risk in the economy. Prerequisite: admission to EMBA program.

EMBA 808. Managerial Accounting for Executives (2.5). Focuses on the use of financial information in management decision making. Includes internal reporting systems, cost management systems, planning and budgeting, performance measurement issues, and activity-based management. Prerequisite: admission to EMBA program.

Finance (FIN)

Department of Finance, Real Estate, & Decision Sciences

Courses for Graduate/Undergraduate Credit

FIN 610. Insurance and Risk Management (3). Covers the concepts of insurance and risk management. Topics include risk identification and analysis, risk management, legal aspects of insurance, structure of the insurance industry, regulation, reinsurance, underwriting, financial issues and analysis, policy analysis, and an overview of many types of personal and commercial insurance including: automobile; homeowner's; property and casualty; umbrella; commercial general liability; errors and omissions; directors and officers; health insurance (including traditional indemnity, HMO and PPO); disability; long-term care; and life. Prerequisites: FIN 340 with a grade of C+ (2.300) or better, junior standing, advanced standing.

FIN 611. Real Estate Finance (3). Cross-listed as RE 611. Real estate financing instruments, institutions, traditional and creative financing techniques. Risk analysis, mortgage financing and underwriting, primary and secondary mortgage markets. Prerequisites: FIN 340 with a grade of C+ (2.300) or better, junior standing, advanced standing.

FIN 618. Real Estate Investment Analysis (3). Cross-listed as RE 618. Equity investor decision criteria, institutional and ownership entity investment constraints, financial leverage opportunities, cash flow analysis, and creative income tax strategies. Prerequisites: FIN 340 with a grade of C+ (2.300) or better, junior standing, advanced standing.

FIN 620. Investments (3). An analysis of investment risks, financial information, and industry characteristics. Examines corporate, government, municipal, and financial institution securities and other investment types. Presents personal portfolio construction, supervision, and management. Prerequisites: FIN 340 with a grade of C+ (2.300) or better, junior standing, advanced standing.

FIN 622. Futures and Options Markets (3). Presents an overview of the futures and options markets. Discusses basic theoretical concepts as well as the practical issues of hedging and speculating in these markets. Prerequisites: FIN 340 with a grade of C+ (2.300) or better, junior standing, advanced standing.

FIN 625. International Financial Management (3). Cross-listed as ECON 674 and IB 625. A study of the international financial and monetary system, emphasizing currency markets. Also examines market instruments and techniques, including synthetic and derivative securities and their application to management of currency risk in international trade and finance. Prerequisites: FIN 340 with a grade of C+ (2.300) or better, junior standing, advanced standing.

FIN 631. Fixed Income Securities and Markets (3). An analysis of the market for fixed-income securities from the investor's point of view. Emphasizes pricing of these securities and an understanding of the factors that determine the structure and level of interest rates. Portfolio management techniques and the use of derivatives will also be covered. Prerequisites: FIN 340 with a grade of C+ (2.300) or better, junior standing, advanced standing.

FIN 632. Bank and Financial Institution Management (3). Presents and analyzes asset and liability management by banks and financial institutions. Also covers financial institution structure, management, regulation, and operations. Covers risk management topics in detail. Prerequisites: FIN 340 with a grade of C+ (2.300) or better, junior standing, advanced standing.

FIN 650. Financial Modeling (3). Provides students experience in solving a variety of financial problems using a modern computer spreadsheet program. Assignments, covering topics from both corporate finance and investments, closely simulate the types of projects faced by financial managers and practitioners. Prerequisites: FIN 440 with a grade of C+ (2.300) or better, junior standing, advanced standing.

FIN 660. Cases in Finance (3). This case-centered course is designed as the capstone course for the finance major and provides an exploration of the problems and operations for which the financial decision maker is responsible, emphasizing current best practices for various types of financial analyses. Should be taken at the end of a finance student's degree program. Prerequisites: FIN 440 and two 600-level finance electives with a grade of C+ (2.300) or better in each, junior standing, advanced standing.

FIN 675. Spreadsheet Modeling for Decision Making (3). Cross-listed as DS 675. A practical spreadsheet-based approach to the modeling of a wide variety of business problems. Concentrates on problem solving in an interdisciplinary context and developing spreadsheet skills. Not open to students with credit in DS 675 or 875. Prerequisites: DS 350, and FIN 340 each with a grade of C+ (2.300) or better, junior standing, advanced standing, or instructor’s consent.
FIN 690. Seminar in Selected Topics (1–5). Repeatable with departmental consent. Prerequisites: FIN 540, junior standing, advanced standing.

FIN 750. Workshop in Finance (1–4). Prerequisites: FIN 340 with a grade of C+ (2.300) or better, and junior standing.

Courses for Graduate Students Only

FIN 810. Short-Term Financial Management (3). Provides state-of-the-art information in short-term financial management. Discusses how cash moves across international borders and within foreign countries and the influence of electronic communication on short-term financial management. Prerequisite: FIN 840 or equivalent.

FIN 821. Investment Analysis and Portfolio Management (3). Study of the basic theory and practice of security valuation and investment management. Includes security and portfolio analysis, selection of investment media, and measurement of performance. Prerequisite: MBA 800 or equivalent.

FIN 823. Risk Management with Options and Futures (3). Cross-listed as ECON 847. Discusses the use of futures and options contracts in managing some of the risks associated with business and investment. Also discusses theoretical issues to provide a basis for understanding the practical uses of these securities. Prerequisite: MBA 800 or equivalent.

FIN 830. Management of Financial Institutions (3). Analyzes the management and operations of firms in the financial services industry. Studies the competitive money and capital markets in which they operate. Emphasizes risk management in the financial institution using a variety of techniques. Prerequisite: FIN 840 or equivalent.

FIN 840. Principles of Finance (3). An intensive analytical introduction to finance from the management viewpoint, including the theory of financial management, the financial institutional structure, and an analysis of a variety of practical problems of business finance. Prerequisite: ACCT 800 or equivalent.

FIN 850. Managerial Finance (3). Provides knowledge and tools to make informed investment and financing decisions. Includes capital markets, advanced capital budgeting, decision making under uncertainty, asset pricing models, contingent claims models, capital structure, dividend policy, mergers, restructuring and corporate control, and exchange rate systems and international finance. Prerequisite: MBA 800 or equivalent.


FIN 866. Public Financial Management (3). Cross-listed as PADM 866. Deals with selected aspects of state and local government financial management. Introduces fund accounting, cost accounting systems, capital budgeting, debt management, and asset management. Prerequisite: FIN 850 or instructor’s consent.

FIN 870. Financial Modeling (3). Prepares students to model various financial transactions and decision-making analysis using computer analysis and spreadsheets. Students build models to analyze corporate finance problems, portfolio and investment problems, derivative securities pricing problems, including real option analysis and fixed-income security valuation and duration problems. Studies technical issues in financial modeling and uses Visual Basic for financial analysis. Students gain tools needed to participate fully, creatively, and with technical proficiency in the resolution of many financial issues facing the firm. Prerequisite: FIN 850.

FIN 890. Seminar in Special Topics (1–3). Repeatable with departmental consent. Prerequisites: FIN 850 and MBA 800 or equivalent.

FIN 891. Directed Studies (1–6). Prerequisites: FIN 850 and MBA 800 or equivalent.

Human Resource Management (HRM)

Department of Management

Courses for Graduate/Undergraduate Credit

HRM 664. Labor Relations (3). The philosophy underlying labor legislation and the function of collective bargaining in labor-management relationships. Prerequisites: HRM 466, junior standing, advanced standing.

HRM 666. Human Resource Staffing (3). Analysis of all phases of the selection process as implemented in private and public sector organizations. Includes an analysis of the impact of federal and state anti-discrimination legislation on selection practices as well as human resource planning, recruiting, job analysis, and selection techniques, including testing and interviewing. Validation of selection techniques is covered. Prerequisites: HRM 466, junior standing, advanced standing.

HRM 668. Compensation (3). Approaches to compensation processes in organizations. Discusses job evaluation techniques, wage level and wage structure determination, individual performance analysis, individual wage rate decisions, incentive plans, and benefits. Considers the legal constraints on compensation practices. Prerequisites: HRM 466, junior standing, advanced standing.

HRM 669. Training and Development (3). Analyzes the training and development function as applied in private and public sector organizations. Considers the role of training and development in today’s business environment, needs assessment, learning objectives, learning theory, instructional methods and techniques, and evaluation of training effectiveness. Prerequisites: HRM 466, junior standing, advanced standing.

HRM 690. Seminar in Selected Topics (1–5). Repeatable with departmental consent. Prerequisites: HRM 466 or instructor’s consent, junior standing, advanced standing.

HRM 750. Workshop in Human Resources (1–4). Prerequisite: junior standing.

Courses for Graduate Students Only

HRM 867. Seminar in Human Resource Management (3). An in-depth study and analysis of several critical and/or major current problems in human resources and a review of significant literature. Prerequisite: MBA 801 or equivalent.

HRM 868. Strategic Reward Systems (3). Studies the various reward systems used in organizations, including non-financial rewards, and analysis of their effectiveness in controlling, motivating, attracting and retaining employees given different individual, organizational and environmental contingencies. Prerequisite: MBA 801 or equivalent.

HRM 890. Seminar in Special Topics (1–5). Repeatable with departmental consent.

HRM 891. Directed Studies (1–5). Prerequisite: departmental consent.

International Business (IB)

Department of Management

Courses for Graduate/Undergraduate Credit

IB 561. International Economics and Business (3). Cross-listed as ECON 672. A survey of the economic foundations of international trade and investment. Studies international trade, theory, and policy (the international economy), then explores the operations of the multinational firm within that environment. Prerequisites: ECON 201 and 202, junior standing, advanced standing.

IB 600. International Management (3). Overview of international business including strategy and organizational behavior. Equip students to manage effectively in an increasingly diverse global marketplace. Covers international strategy formulation, cross-border alliances, control and coordination systems in multinational organizations, social responsibility and ethics, culture and communication in global management, international negotiations, and management of global human resources. Prerequisites: MGMT 300, IB 333, advanced standing, junior standing.

IB 601. International Marketing (3). Cross-listed as MKT 601. Problems and procedures of marketing in foreign countries. Includes the effects of foreign cultures and marketing systems on the design of marketing programs. Prerequisites: MKT 300 with a minimum grade of C+ (2.300), junior standing, advanced standing.

IB 602. Legal Environment of International Business (3). Cross-listed as BLAW 602. Analysis of legal and regulatory issues affecting import-export transactions, licensing and technology transfer, and international sales of services. Prerequisite: IB 333, junior standing, advanced standing.

IB 625. International Financial Management (3). Cross-listed as ECON 674 and FIN 625. Studies the international financial and monetary system, emphasizing currency markets. Also examines market instruments and techniques, including synthetic and derivative securities and their application to management of currency risk in international trade and finance. Prerequisites: FIN 340 with a grade of C+ (2.300) or better, junior standing, advanced standing.

IB 690. Special Topics in International Business (3). Covers emerging topics within the field of international business. Prerequisite: completion of or concurrent enrollment in all required IB courses, junior standing, advanced standing.
Courses for Graduate Students Only

IB 836. International Business & Competitiveness (3). An introduction to international business administration with particular attention to the development of multinational business strategies in light of the diverse economic, political, social, and cultural dimensions of the environments that exist in both developed and developing areas of the world.

IB 890. Seminar in Special Topics (1–3). Repeatable with departmental consent.


IB 892. Internship in IB (1–3). Prerequisite: departmental consent.

Management (MGMT)
Department of Management

Courses for Graduate/Undergraduate Credit

MGMT 661. Coaching, Developing, and Mentoring (3). Managers and leaders of all kinds are judged not on what they do but upon how well their subordinates perform. Course develops positive, supportive management skills for helping individuals and groups achieve their potential. Covers the importance of identifying and hiring superior performers, orienting them to the group, coaching and developing subordinates to their fullest, maintaining motivation at high levels, and merging individuals into a cohesive group. Prerequisites: MGMT 360, junior standing, advanced standing.

MGMT 662. Managing Workplace Diversity (3). Modern organizations face the challenge of managing employees with diverse backgrounds and talents to provide products and services to diverse customers. Course examines workforce diversity from the perspective of maximizing its benefits to group and organizational effectiveness, including developing skills to facilitate the constructive resolution of conflict, encouraging cooperation and teamwork, and enhancing identification with the work unit. Prerequisites: MGMT 360, junior standing, advanced standing.

MGMT 680. Making Effective Decisions (3). Studies the theories of decision making with attention to the factors of rational decision making and application of quantitative methods, cognitive and motivational influences, intuition, political influences, ethics, and the process of negotiation and decision making in groups along with decision implementation and learning from past decisions. Prerequisites: MGMT 360, junior standing, advanced standing.

MGMT 681. Strategic Management (3). An analysis of business problems from a strategic management perspective. A capstone course which integrates the functional areas of business, including management, marketing, finance, accounting, and production. Discusses both domestic and international policy issues, large and small firms, and various sources of competitive advantage. Prerequisites: DS 350, FIN 340, MKT 300, MGMT 360, senior standing, advanced standing.

MGMT 690. Seminar in Selected Topics (1–5). Repeatable with departmental consent. Prerequisites: junior standing, advanced standing.

MGMT 750. Workshop in Management (1–4). Prerequisite: junior standing.

Courses for Graduate Students Only

MGMT 803. Business Decision Making and Analysis (3). A study of business decision making and problem solving methodologies including problem definition, research design, data gathering techniques, analytical techniques, reporting strategies, and communication issues. Prerequisite: ECON 231 or equivalent.

MGMT 812. Introduction to Total Quality Management (3). Cross-listed as ENTR 812. Introduces the philosophy of quality improvement and compares/contrasts these views with traditional management thought. Also introduces the basic components of the quality improvement process. Includes application exercises in quality improvement techniques and experience with team concept.

MGMT 862. Organizational Behavior (3). The study of individual and group behavior as it impacts organizational effectiveness and employee well-being. Applies concepts such as motivation, personality, job attitudes, interpersonal relations, teams, organizational culture, and leadership/influence to organizational settings, emphasizing integration and application of concepts. Prerequisite: MBA 801 or equivalent.

MGMT 865. Communication (3). Cross-listed as COMM 865. An analysis of communication models emphasizing their applications to communication problems in organizations. Explores social-psychological processes underlying persuasion in interpersonal relations and through the mass media. Critically analyzes communication systems and techniques within formal organizations. Prerequisite: MBA 801 or equivalent.

MGMT 885. Advanced Strategic Management (3). An analysis of business problems from a strategic perspective. Builds on prior coursework to focus on a firm’s ability to develop a sustainable competitive advantage. Firms studied represent a broad range of manufacturing and service, global and domestic, entrepreneurial and mature issues. Prerequisite: to be taken during last semester of student’s program, or departmental consent.

MGMT 890. Seminar in Special Topics (1–5). Repeatable with departmental consent.

MGMT 891. Directed Studies (1–5). Prerequisite: departmental consent.

MGMT 893. Special Project in Management (1–4). A special project including original case research, supervised internships, or field research. Prerequisite: approval of the MS committee. Open only to MS in business degree candidates.

Management Information Systems (MIS)
Department of Finance, Real Estate, & Decision Sciences

Courses for Graduate/Undergraduate Credit

MIS 600. Database Management Systems (3). Introduces various methodologies for conceptual data modeling including entity-relationship data modeling and object-oriented database design. Covers relational database management systems, the SQL standard, and data administration issues. Students obtain hands-on development with SQL servers in a client/server environment in a required database programming project. Covers electronic commerce transaction processing, data warehousing, data mining, and distributed database management. Prerequisites: BADM 160 with a grade of C+ (2.300) or better, junior standing, advanced standing.

MIS 605. Systems Analysis and Design (3). Introduces various methodologies for systems analysis, design, and implementation. Examines application development in the context of the overall MIS master planning effort; examines techniques related to business process reengineering. Uses a real-life project as the vehicle to put into practice tools and techniques related to interviewing, cost/benefit analysis, computer-aided software engineering, software project management, and system documentation. Prerequisites: MIS 600 with a grade of C+ (2.300) or better, junior standing, advanced standing.

MIS 610. Database and Web Programming (3). Uses ASPNET as the programming tool to teach Web application development. Includes HTML forms and SQL-based data sources for developing interactive and dynamic Web applications within a server-based scripting environment. Covers advanced topics such as ADO and implementing security in ASP. Prerequisites: MIS 325 and 600 each with a grade of C+ (2.300) or better, junior standing, advanced standing.

MIS 615. Fundamentals of Data Structures, File Design and Access (3). A second course in programing emphasizing data structuring concepts necessary for building business application systems. Uses file design and access applications as the vehicle to teach traditional concepts of in-memory data structures as well as more advanced event-driven, object-oriented programming practices. Prerequisites: MIS 310 with a grade of C+ (2.300) or better, junior standing, advanced standing.

MIS 650. Knowledge Management (3). Introduces the design and implementation of systems for leveraging organizational knowledge and intellectual capital. Includes the role of expert systems, data warehousing and knowledge discovery tools, knowledge repositories, e-learning applications, and discussion and chat technologies for knowledge creation and sharing in support of decision making and problem solving in business. Prerequisites: MIS 600 with a grade of C+ (2.300) or better, junior standing, advanced standing.

MIS 690. Seminar in Selected Topics (1–3). Repeatable for credit with departmental consent. Prerequisites: senior standing, departmental consent, advanced standing.

MIS 696. Management of the IS Function (3). Addresses the issues of managing the information...
systems (IS) function. Includes the role of IS as a corporate entity, developing a strategic plan for IT investments, organizing the IS department, IS personnel management, IS project management, the role of IS as a user support entity, auditing the IS function, and emerging issues in managing the IS department. Prerequisites: MIS 605 or concurrent enrollment, junior standing, and advanced standing.

Courses for Graduate Students Only

MIS 874. Management Information Systems (3). Focuses on information as an organizational resource to be managed. Explores the link between business strategy and information technology, and addresses the organizational implications of investing in information systems. Goal is to prepare today's manager with the necessary know-how to successfully manage with information technology.

MIS 884. Database Planning and Management (3). Prepares students to deal with issues in planning and managing organization-wide integrated databases. Emphasizes logical database design and relational database implementation. Includes SQL, assuming database integrity, database conversion, database administration, and data management for computer integrated manufacturing. Prerequisite: MIS 874 or instructor's consent.

MIS 890. Seminar in Special Topics (1–3). Repeatable for credit with departmental consent.

MIS 891. Directed Study (1–3). Individual study of various aspects and issues in information technology. Repeatable for credit with departmental consent.

Marketing (MKT)
Department of Marketing

Courses for Graduate/Undergraduate Credit

MKT 601. International Marketing (3). Cross-listed as IB 601. Problems and procedures of marketing in foreign countries. Includes the effects of foreign cultures and IR 601. Problems and procedures of marketing in foreign countries. Includes the effects of foreign cultures and policies involved in managing a sales force. Prerequisites: MKT 300 with a grade of C+ (2.300) or better, junior standing, advanced standing.

MKT 609. Marketing Programs (3). Studies all the aspects of the marketing mix that are integrated to make an effective and coordinated marketing program. Prerequisites: MKT 300 with a grade of C+ (2.300) or better, 6 additional hours of marketing, junior standing, advanced standing.

MKT 690. Seminar in Selected Topics (1–5). Repeatable with instructor's consent. Prerequisites: junior standing, advanced standing.

MKT 750. Workshop in Marketing (1–4). Prerequisite: junior standing.

Courses for Graduate Students Only

MKT 801. Marketing Management (3). Develops an understanding of the difference between a sales/marketing department and a marketing orientation. Emphasizes the integral role of a marketing orientation throughout the modern organization. Prerequisite: MBA 801.

MKT 803. Marketing Analysis (3). An application of the scientific method to the design and implementation of research procedures that support the need for management decision making, planning, and strategy development in the marketplace. Prerequisite: MBA 801 or equivalent.

MKT 805. Consumer Decision Processes (3). An examination of different aspects of the behavior of consumers and the factors that help explain their behavior. Includes an analysis of current concepts and models. Prerequisite: MBA 801 or instructor's consent.

MKT 866. Seminar in New Product & Technology Development (3). Cross-listed as ENTR 866. The innovative transformation of knowledge into commercial products and services. Teams of students assess real technologies for their commercial potential in terms of licensing and/or venture development. Examines concepts associated with new product and technology commercialization. Concepts are introduced that improve and accelerate the commercialization process, from decisions made by scientists at the research bench, through the development, patenting, and licensing of new technologies, to the formation of entrepreneurial enterprises. Not open to students with credit in MKT/ENTR 666.

MKT 890. Seminar in Special Topics (1–3). Repeatable with instructor's consent.

MKT 891. Directed Studies (1–5). Prerequisite: departmental consent.

Master of Business Administration (MBA)
Graduate Studies in Business

Courses for Graduate Students Only

MBA 781. Cooperative Education (1). Provides the graduate student with a field placement which integrates theory with a planned and supervised professional experience. Programs must be formulated in consultation with appropriate graduate faculty. May be repeated for credit up to 3 hours. May not be used to fulfill degree requirements. Offered C/NG only.

MBA 800. Financial Statement Analysis (3). Studies financial statements and related footnote disclosures. Includes tools and procedures common to the interpretation and analysis of financial statements. Prerequisites: graduate standing and permission of a Barton School graduate studies adviser.

MBA 801. MBA Basics: Management & Marketing (3). Highlights foundation knowledge from the disciplines of management and marketing integrated with a strong component of communication skills. Primarily, provides students with a knowledge base in management and marketing from which to build in their MBA coursework. Secondly, builds oral and written communication skills necessary for success in the MBA curriculum and beyond. Prerequisites: graduate standing and permission of a Barton School graduate studies adviser.

Real Estate (RE)
Department of Finance, Real Estate, & Decision Sciences

Courses for Graduate/Undergraduate Credit

RE 611. Real Estate Finance (3). Cross-listed as FIN 611. Real estate financing instruments, institutions, traditional and creative financing techniques. Risk analysis, mortgage financing and underwriting, primary and secondary mortgage markets. Prerequisites: FIN 340 with a grade of C+ (2.300) or better, junior standing, advanced standing.

RE 614. Real Estate Appraisal (3). Analysis of factors that create real estate value. Cost, sales comparison, and capitalized income approaches to market value. Highest and best use analysis. Prerequisites: RE 310 or instructor's consent, junior standing, advanced standing.

RE 618. Real Estate Investment Analysis (3). Cross-listed as FIN 618. Equity investor decision criteria, institutional and ownership entity investment constraints, financial leverage opportunities, cash flow analysis, and creative income tax strategies. Prerequisites: FIN 340 with a grade of C+ (2.300) or better, junior standing, advanced standing.

RE 619. Urban Land Development (3). A hands-on course to familiarize students with all aspects of land development, including supply and demand analysis, site selection, feasibility analysis, development financing, cash-flow budgeting, and marketing strategies. Prerequisites: RE 310 or 611 or 618, or instructor's consent; junior standing, advanced standing.

RE 690. Seminar in Selected Topics (1–5). Repeatable with departmental consent. Prerequisites: junior standing, advanced standing.

RE 750. Workshop in Real Estate (1–4). Prerequisite: junior standing.

Courses for Graduate Students Only

RE 890. Seminar in Special Topics (1–3). Repeatable with departmental consent.

RE 891. Directed Studies (1–5). Prerequisite: departmental consent.
College of Education

Offices: 104 Corbin Education Center
Sharon H. Iorio, dean
Shirley Lefever-Davis, associate dean
Sheril Logan, assistant dean

Departments:
Counseling, Educational, and School Psychology, (316) 978-3326—Marlene Schommer-Aikins, chairperson
Curriculum and Instruction, (316) 978-3322—Janice Ewing, chairperson
Educational Leadership, (316) 978-3325—Jean Patterson, chairperson
Human Performance Studies, (316) 978-3340—Michael Rogers, chairperson
Sport Management, (316) 978-5445—Clay Stoldt, chairperson

The College of Education offers programs leading to the Master of Arts in Teaching (MAT), Master of Education (MEd) in counseling, curriculum and instruction, educational leadership, educational psychology, exercise science, sport management, and special education; the Specialist in Education (EdS) in school psychology; and the Doctor of Education (EdD) in educational leadership.

Graduate Level Licensure
Graduate offerings include courses which help students meet requirements for state licensure as principals, district school administrators, school counselors, professional counselors, early childhood teachers, English as a second language/bilingual education teachers, special education teachers, reading specialists, and school psychologists. Other programs are available to support the continued academic and professional development of teachers. Graduate offerings also are available to support careers in sport management and exercise science.

Certificates Offered
Certificates offered by the College of Education include: child/play therapy, educational technology, literacy, National Board for Professional Teaching Standards, coaching, and functional aging.

Admission Requirements
Specific admission requirements for each degree specialization are described in each department’s section of the Graduate Catalog. Applicants for admission should review admission criteria well in advance of intended enrollment dates to allow sufficient time for the admission process to be completed. Several programs require submission of scores from examinations (e.g., Graduate Record Examination), as well as transcripts and letters of reference.

Minimum admission requirements for full standing include a bachelor’s degree from a regionally accredited institution and a grade point average of at least 2.750 based upon the last 60 credit hours of coursework (including any post-bachelor’s graduate work). The student should have no more than 9 credit hours of background deficiencies in the major field of graduate study desired. For most College of Education degree programs, admission requirements exceed these minimums.

Master of Education Degree Requirements
Each program of study specifies the number of credit hours of graduate coursework required, elective courses, practica, comprehensive examinations, portfolio, project, and/or thesis requirements. Specific degree requirements are listed on program sheets available from departmental offices or departmental Web sites.

A thesis option in most MA or MEd programs (check departmental descriptions) may be elected. Appropriate thesis topics range from basic to applied to action research, and approaches vary from historical to descriptive to experimental, both qualitative and quantitative. Thesis programs typically require a minimum of 30 credit hours, approval of the thesis proposal by the student’s graduate adviser and thesis committee, and an oral examination over the thesis topic. The committee is appointed by the graduate dean from nominees submitted by the student’s adviser.

Candidates not choosing to do a thesis are expected to complete a portfolio, comprehensive examination, or project, depending on specific program requirements. The Degree Requirements section of the Graduate Catalog for each department lists any specific non-thesis requirements.

To remain in good standing in a graduate degree program requires a grade point average of at least 3.000 in all courses on the student’s WSU plan of study and in all graduate work taken at WSU. Demonstrated suitability for professional practice, as determined by faculty, is also a consideration for remaining in good standing in graduate programs leading to advanced certificates, licenses, or other endorsements indicating advanced professional practice or achievement.

Financial Assistance
Some financial assistance to support graduate study is available, including federal traineeships, assistantships, and Wichita State University fellowships. Full-degree status is required to receive financial assistance.
Applications for graduate program admission must be submitted by departmental deadlines to be eligible for student loans and scholarships.

**Initial Teacher Licensure**

Both undergraduates and degree/non-degree graduate students may pursue initial licensure as a teacher (PreK–12 schools) through Wichita State University. Interested individuals should contact the Office of Education Support Services in the College of Education, (316) 978-3300, to inquire about teacher education as a graduate student.

**Specialist in Education Requirements**

- Requires coursework and practica
- Eligible for licensure

**Education Doctorate in Educational Leadership**

- Requires coursework
- Requires dissertation and comprehensive examination

**Counseling, Educational and School Psychology**

**Graduate Faculty**

Professors: Randolph A. Ellsworth, W.C. Joseph Mau, Marlene Schommer-Aikens

Associate Professors: Ruth A. Hitchcock, Nancy A. McKellar

Assistant Professors: Catherine Bohn-Gettler, Nikki Currie

**Degrees and Areas of Specialization**

The department of counseling, educational and school psychology offers programs leading to the Master of Education (MEd) in counseling, the MEd in educational psychology, and the Specialist in Education (EdS) in school psychology. There is also a post-graduate certificate program in play therapy.

**Master of Education Requirements**

The Master of Education (MEd) in counseling and in educational psychology may be earned under a thesis or non-thesis option. The non-thesis option in counseling requires 46 credit hours of coursework and a written comprehensive examination. The thesis option requires 32 credit hours of coursework plus an oral examination over the thesis.

Candidates for the non-thesis MEd in educational psychology and in counseling are required to pass a written comprehensive examination in their major area. Within the first three weeks of the semester in which students take the exam, an Application for Comprehensive Examination should be filed with the department office. Applications will not be accepted if submitted less than two weeks prior to the scheduled examination.

**Admission Requirements Counseling**

In addition to the general requirements, students seeking admission to the counseling program are required to have a 3.000 grade point average based upon the last 60 credit hours of coursework (including any post-bachelor's graduate work). They must also submit: (a) names, addresses, and telephone numbers of three people to serve as professional references; (b) a statement of professional goals; (c) a resume; and (d) evidence of completion of 9 credit hours of undergraduate psychology, plus 6 additional undergraduate hours in the behavioral sciences.

Admission to the MEd program in counseling does not require the teaching license.

However, students whose career goals are school counseling must:

1. Complete the MEd in counseling at the 46-credit-hour non-thesis level, or the 54-credit-hour thesis level;
2. Take the Praxis II exam with a score of 600 or better;
3. Have a professional teacher's license; and
4. Apply for a conditional license when the first three requirements above are completed.

For students whose career goals are counseling outside of schools, priority is given to applicants wanting to work with children and adolescents in higher education settings, or in the addictions field. Students wanting to work outside of schools are strongly encouraged to pursue licensure as a clinical professional counselor.

Applications for admission to the MEd in counseling and educational psychology are reviewed when they become complete throughout the year. Candidates who apply are considered in the order in which their applications are completed until all openings are filled.

**Specialist in Education Requirements**

The Specialist in Education (EdS) in school psychology requires 39 credit hours of coursework beyond the MEd. The degree is awarded upon completion of coursework and practica. For full licensure in school psychology, students must apply for a professional school license, register for a 4-credit-hour post-specialist internship, and complete the full-time, one-year internship in a public school.

Applications for admission to the EdS in school psychology are reviewed when they become complete throughout the year. Candidates who apply are considered in the order in which their applications are completed until all openings are filled.

**Admission Requirements School Psychology**

Students who have completed a master's degree in educational psychology, counseling, or a directly related area may apply for admission. Students must provide graduate degree transcripts; undergraduate grade point average for the last 60 credit hours; Graduate Record Examination scores (verbal and quantitative); Graduate Record Examination writing assessment score; a resume; names, addresses, and phone numbers of three people to provide letters of reference; a statement of professional goals; and a statement of research interests. The Graduate Record Examination (GRE) and grade point average (GPA) will be evaluated using the following index:

\[
\text{GPA + (GRE Verbal + GRE Quantitative)}
\]

Ordinarily, applicant's scores on this index will equal or exceed 5.5. This index of 5.5 could be achieved by a student who attained a combined verbal and quantitative score on the GRE of 1,000 and a B average (3.000) over the last 60 credit hours of undergraduate coursework.

Applications for admission to the MEd in counseling and educational psychology are reviewed when they become complete throughout the year. Candidates who apply are considered in the order in which their applications are completed until all openings are filled.

**Educational Psychology**

To be considered for admission to the MEd in educational psychology, students must provide their grade point average for the most recent 60 credit hours of undergraduate coursework; Graduate Record Examination scores (verbal and quantitative); Graduate Record Examination writing assessment score; a resume; names, addresses, and phone numbers of three people to provide letters of reference; a statement of professional goals; and a statement of research interests. The Graduate Record Examination (GRE) and grade point average (GPA) will be evaluated using the following index:

\[
\text{GPA + (GRE Verbal + GRE Quantitative)}
\]

Applications for admission to the MEd in counseling and educational psychology are reviewed when they become complete throughout the year. Candidates who apply are considered in the order in which their applications are completed until all openings are filled.

**Admission Requirements School Psychology**

Students who have completed a master's degree in educational psychology, counseling, or a directly related area may apply for admission. Students must provide graduate degree transcripts; undergraduate grade point average for the last 60 credit hours; Graduate Record Examination scores (verbal and quantitative); Graduate Record Examination writing assessment score; a resume; names, addresses, and phone numbers of three people to provide letters of reference; a statement of professional goals; and a statement of research interests. The Graduate Record Examination (GRE) and grade point average (GPA) will be evaluated using the following index:

\[
\text{GPA + (GRE Verbal + GRE Quantitative)}
\]
interests. Undergraduate grade point average (GPA) and Graduate Record Examination (GRE) scores will be evaluated using the following index:

\[
\text{GPA} + (\text{GRE Verbal} + \text{GRE Quantitative}) \div 400
\]

Ordinarily, applicant’s scores on this index will equal or exceed 5.5. The GPA and GRE index of 5.5 could be achieved by a student who attained combined verbal and quantitative scores on the GRE of 1,000 and a B average (3.000) over the last 60 credit hours of undergraduate coursework.

Following admission to the EdS program, each student will meet with a faculty adviser to determine whether prerequisite requirements have been met or how remaining prerequisites can best be met. All students must complete the introductory professional issues course at WSU, and all students must have either completed a thesis equivalent or prepared a thesis equivalent as part of the EdS program. A thesis equivalent differs from a thesis required courses for the prerequisite graduate degree.

2. In the semester the certificate requirements are met students must:
   a. With graduate adviser, prepare and submit to the Graduate School a plan of study for the certificate.
   b. Submit to the Graduate School an application for the certificate along with a $15 filing fee. Deadlines are no later than the 20th day of fall or spring semester, or the 10th day of a summer term.

Certificate in Child/Play Therapy

The counseling program in the department of counseling, educational and school psychology offers a post-master’s certificate program in child/play therapy. The certificate program curriculum is designed to meet training standards for play therapists established by the Association of Play Therapy. The certificate program is comprised of the following courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CESP 841</td>
<td>Fundamentals of Play Therapy</td>
</tr>
<tr>
<td>CESP 842</td>
<td>Play Therapy with Young Children</td>
</tr>
<tr>
<td>CESP 843</td>
<td>Child Psychopathology in Play Therapy</td>
</tr>
<tr>
<td>CESP 844</td>
<td>Advanced Techniques in Child and Play Therapy</td>
</tr>
<tr>
<td>CESP 865</td>
<td>Practicum in Play Therapy</td>
</tr>
</tbody>
</table>

The practicum requires students to conduct 100 hours of play therapy while receiving weekly supervision from an experienced play therapist.

Admission Requirements

1. Evidence of having completed a master’s degree in counseling, social work, or a closely related field.
2. Cumulative graduate GPA: 3.250 in required courses for the prerequisite graduate degree.
3. Resume: The resume should include evidence of experience working in a professional counseling role.
4. Goal Statement: The goal statement must indicate an intention to work with young children as part of a future professional role.
5. References: Two professional references.

Completion requirements

A cumulative graduate GPA of 3.00 for all courses comprising the certificate program is required. No grades below a C (2.000) are allowed in certificate program courses.

Completion process:

1. Students must notify the program area in writing of intent to complete the certificate.
2. In the semester the certificate requirements are met students must:
   a. With graduate adviser, prepare and submit to the Graduate School a plan of study for the certificate.
   b. Submit to the Graduate School an application for the certificate along with a $15 filing fee. Deadlines are no later than the 20th day of fall or spring semester, or the 10th day of a summer term.

Counseling, Educational, and School Psychology (CESP)

Courses for Graduate/Undergraduate Credit

CESP 517. Families and Addictions (3). Teaches basic family processes in families with a family member experiencing an addiction. The impact of the addiction on the functioning of other family members is examined, including children and adolescents. The family’s role in the recovery process is examined. Major topics include: family systems theory, alcoholic family systems and the impact of substance abuse and addiction on the family. Basic family assessment and interventions are covered. Prerequisite: PSY 111 or equivalent course.

CESP 701. Introduction to Educational Research (3). An introduction to research in education. Includes (1) a survey of current educational research, (2) the nature of research methodology, (3) the preparation of research reports, and (4) criticism of current research.

CESP 704. Introduction to Educational Statistics (3). Introduction to statistics, including measures of central tendency, measures of variability, correlation, chi square, t-test, correlated t-test, one-way, two-way analysis of variance, and simple regression.
program evaluation including history and current trends, alternative program evaluation models, program evaluation standards, program evaluation procedures, data collection instrument development and interpretation, data analysis, and reporting of evaluation results. Prerequisites: CESP 701 and 704, or equivalent.

**CESP 815. Career Development (3).** For master's-level students interested in assisting students and adults in career development and related concerns. Covers (1) career development of individuals across life span, (2) sources and organization of information, (3) assessment designs and career intervention techniques, and (4) career decision-making/planning processes. Includes hands-on experience with a variety of assessment methods and intervention techniques and theory-based career decision-making strategies for career interventions. Prerequisites: CESP 803 or 804 or instructor's consent.

**CESP 820. Learning Theory and Instruction (3).** Applications of some major learning theories and learning principles. Prerequisites: CESP 701 and 728 or departmental consent.

**CESP 821. Multicultural Issues in Counseling (3).** Cross-listed as PSY 971. Students acquire knowledge and skills that enable them to offer help to individuals in a multicultural environment. Focuses include developing a sense of the student's own cultural identity, increasing sensitivity to cultural differences in help-seeking attitudes and behaviors, and understanding how the potential sources of cultural misunderstanding, biases, and prejudice may affect their counseling effectiveness. Prerequisites: CESP 701, 803 or 804, or instructor's consent.

**CESP 822. Assessment in Counseling (3).** Survey and study of standardized tests and their application in counseling, emphasizing their selection, use, and interpretation. Studies the basic concepts pertaining to the interpretation of psychological tests and inventories, including basic measurement theory and the factors involved in the selection of tests. Prerequisites: CESP 701 and 704; CESP 803 or 804.

**CESP 823. Experimental Design in Educational Research (3).** Focuses on the use of inferential statistics for various experimental designs. Parametric topics covered include T-test, one-way and factorial analysis of variance and covariance (with and without repeated measures), post-hoc comparisons, and simple and multiple regression. Also covers several nonparametric statistics. Develops all statistics through practical application with computer programs. Prerequisite: CESP 704 or instructor's consent.

**CESP 824. Techniques of Counseling (3).** Cross-listed as PSY 972. Examines and practices techniques of counseling, emphasizing their selection, use, and interpretation. Counseling through simulated counseling situations and extensive examination of counseling case studies. Prerequisites: CESP 728, 802, 803 (or concurrent enrollment), 804, 821, 822, or departmental consent.

**CESP 825. Group Counseling Techniques (3).** Cross-listed as PSY 973. Examines different kinds of groups, group selection, communication patterns in groups, and issues to be addressed in group settings. Prerequisites: CESP 728, 803 (or concurrent enrollment), 804; and counseling major or departmental consent.

**CESP 831. Social Psychology of Education (3).** A critical study of the individual based on the influences of impact and interactions with society at all levels of the individual's culture. Throughout the course, theory, research, and practice as they relate to social issues and problems are discussed. Students study the relationship between social settings and the psychological functioning of children, adolescents, and adults, as well as the role of the social scientist within the cultural, academic, and organizational operations of education. Prerequisites: CESP 701, 728, and 820.

**CESP 834. Biological Principles and Psychological Functioning for School Psychologists (3).** Biological bases of behavior and implications for assessment and intervention within school settings are major topics. Neuropsychological assessment and intervention, sensory and motor functioning, and psychopharmacological treatments relevant to children's functioning in school comprise a major component. Specially designed for school psychologists. Prerequisite: Graduate standing in the CESP department (enrolled in a degree program or non-degree A status in CESP), or instructor's consent.

**CESP 835. Psychopathology and DSM-IV (3).** Introduction to psychopathology for graduate students preparing for careers in school psychology, counseling, and related professions. Mental disorders occurring in children as well as adults are studied. The Diagnostic and Statistical Manual of Mental Disorder (DSM) is used as the diagnostic system for understanding psychopathology. Assessment procedures, prevention programs, and treatment/intervention approaches are considered for the mental disorders studied. Prerequisite: CESP 728 and 840 (school psychology students only), or departmental permission.

**CESP 837. Family Issues in Counseling (2).** Cross-listed as PSY 974. Teaches basic family processes and how they impact the growth and development of children and adolescents. Covers family systems theory, the family life cycle, cultural and social influences on families, healthy family functioning, the impact of substance abuse on the family, and the unique challenges faced by single parent and blended families. Presents basic family assessment and therapy techniques. Prerequisite: graduate standing.

**CESP 840. Psychology of Exceptional Children (3).** Study of the conceptual and theoretical formulations, empirical evidence, and research concerning behavioral characteristics of exceptional children.

**CESP 841. Fundamentals of Play Therapy (3).** Covers the historical development of play therapy as a treatment procedure, through current trends and practices of major disciplines in the field. Primary emphasis is on the development of fundamental skills and practices of major disciplines in the field. Primary emphasis is on the development of fundamental skills and strategies necessary to conduct successful play sessions. The effectiveness of play therapy with various diagnostic populations is discussed. Prerequisites: master's degree in counseling or related field or program consent.

**CESP 842. Play Therapy with Young Children (3).** Examines the use of play therapy with young children. Emphasizes the developmental concepts and diagnostic approaches and issues of young children and their caregivers. Therapy strategies covered include treatment of regulation problems, filial therapy, floor time, interaction guidance, infant/parent relationship training and other strategies. Prerequisites: master's degree in counseling or related field or program consent.

**CESP 843. Child Psychopathology in Play Therapy (3).** Examines common childhood diagnoses that present for treatment. Topics include: Reactive Attachment Disorder, Oppositional Defiant Disorder, Separation Disorder, Post Traumatic Stress Disorder, as well as other common DSM IV diagnoses. The class discusses symptoms and the child's clinical presentation. Appropriate treatments, including the use of play therapy and other therapy activities is also covered. Prerequisites: master's degree in counseling or related field, CESP 841 or equivalent course; or program consent.

**CESP 844. Advanced Techniques in Child and Play Therapy (3).** An advanced skills class, building on the fundamental and requisite skills learned in an introductory course in play therapy. Emphasizes enhanced understanding and use of the nature and construction of therapeutic responses in the play therapy process. Explores the use of play therapy with varied therapeutic approaches and special populations. Prerequisites: master's degree in counseling or related field, CESP 841 or equivalent course; or program consent.

**CESP 845. Professional School Counseling (3).** The role of school counselors in providing counseling, guidance and consultation services to students, staff, and parents in PreK–12 settings is covered. Prerequisites: Admission to the counseling degree program, CESP 803, 804 or departmental consent.

**CESP 852. Special Studies (1–4).** Covers specific topics identified by the department in consultation with institutions or groups of graduate students. Course procedures vary according to topic. Repeatable. Prerequisite: instructor's or departmental consent.

**CESP 853. Law, Ethics, and Multicultural Issues for School Psychologists (3).** For school psychology students and practicing school psychologists. Covers issues of legislation, litigation, professional ethics, and cultural diversity that impact the practice of school psychology. Prerequisite: admission to the school psychology program or instructor's consent.

**CESP 855. Individual Intelligence Assessment (3).** Cross-listed as PSY 976. Use of individual tests for assessment of intelligence. Examines the nature of intelligence, theory, administration and interpretation of selected individual intelligence tests, and critical issues related to the assessment of intelligence. Includes case simulation and practice activities. Prerequisites: CESP 822 and instructor's consent.

**CESP 856. Counseling Practicum (3).** Supervised practice in counseling. Requirements include at least 60 client contact hours. Repeatable for credit. Prerequisites: CESP 824 within the last calendar year, CESP 802, 815 (or concurrent enrollment), 825, 845, 857 (or concurrent enrollment), practicum coordinator's consent, and counseling major or departmental consent.

**CESP 857. Professional and Ethical Issues (3).** Study of major ethical, legal, and professional issues in counseling, including those issues related to diagnosis and treatment of mental illness using the DSM IV. Prerequisites: CESP 803, 821, 822, or instructor's consent.
CESP 888. Diagnostic Testing (3). An in-depth examination of the assessment process. Studies the theory and uses of individual assessment techniques for evaluating the learning difficulties of preschool and school-aged children. Emphasizes planning the assessment, interpreting and integrating assessment data, proposing relevant interventions, and communicating assessment findings to others. Prerequisites: CESP 822, 855, and instructor's consent.

CESP 889. School-Based Interventions (3). Focuses on planning, implementing, monitoring, and evaluating interventions in the school setting with students who are experiencing academic and/or behavioral problems. Prerequisites: CESP 822 or departmental consent.


CESP 862. Presentation of Research (1–2). A project submitted in thesis manuscript form. Repeatable for a maximum of 2 hours of credit. Prerequisite: CESP 860.

CESP 865. Practicum in Play Therapy (3). Students conduct and observe a series of play therapy sessions with children. Individual and group supervision is provided. Each student participates in analysis and discussion of therapy intervention strategies, completing session critiques and therapy plans. Prerequisites: master's degree in counseling or related field, CESP 841 or equivalent course; or program consent.

CESP 871. History and Philosophy of Higher Education in the U.S. (3). American higher education has evolved into a complex discourse that includes multiple areas and constituents. Course explores the evolution of the American higher education experiences, and dominates issues such as governance, structure, finance, and accountability. Prerequisites: admission to counseling degree or departmental consent.

CESP 873. College Student Development and the Campus Environment (3). Explores the history, meaning, and implications of student development theories. Emphasizes typologies, person-environment, psychosocial, and cognitive theories and the diversity of student populations served by student affairs. Special focus on the application of theory and how it may provide a springboard for practice and further discovery. Prerequisite: CESP 728 or departmental consent.

CESP 874. Legal and Ethical Issues in Higher Education (3). Intended for students in graduate programs emphasizing higher education interested in an introduction to the legal issues that have had an impact on the field of higher education. Designed to expose the student to a range of administrative problems at the post-secondary level which entail legal implications. Prerequisite: CESP 871 or departmental consent.


CESP 890. Special Problems (1–3). Directed reading and research under the supervision of a graduate instructor. Prerequisite: departmental consent.

CESP 914. Consultation Techniques (3). Intensive study of the literature in counseling, school psychology, social psychology, and administration that provides a basis for consultation techniques in the interpersonal context of school and work settings.

CESP 934. Personality Assessment (3). Focuses on theory and interpretation of instruments representing three major approaches to personality assessment: projective techniques, behavioral techniques, and personality inventories. Includes alternative personality assessment approaches and reviews of personality theory and psychopathology. Includes supervised experience. Prerequisites: CESP 822, 855, post-master's standing or last 6 hours of master's program, and instructor's consent.

CESP 946. Practicum in School Psychology (3 or 6). Supervised practice in providing school psychological services to children in school, clinical, or community agency settings. Requires at least 300 hours applied experience over 3 hours of credit. Repeatable for a maximum of 6 hours. Prerequisite: departmental consent.

CESP 947. Internship in Counseling (2). The internship is a placement appropriate to the intern's career objectives in a position within an agency, institution, or school. The student and university supervisor develop goals and objectives that enhance the student's level of professional functioning. Repeatable up to 6 hours of credit.

CESP 977. Internship in School Psychology (2). Supervised experience as a school psychologist in a school or agency setting. Requires at least 600 hours of applied experience. Repeatable for a maximum of 4 hours. Prerequisites: CESP 946 and departmental consent.

CESP 990. Special Problems in Counseling and School Psychology (1–3). Directed problems in research for EdS students under supervision of a graduate instructor. Prerequisites: CESP 701 and instructor's consent.

Curriculum & Instruction (CI)

Graduate Faculty

Professors: Shirley Lefever-Davis (associate dean), Jeri A. Carroll (graduate coordinator for MEd in CI), Linda Mitchell, Frances Clark, Janice Ewing, Kay Gibson (graduate coordinator for MEd in Special Ed.), Johnnie Thompson, Anh Tran

Associate Professors: Mara Alagic, Peggy Anderson, Janice Ewing, Kay Gibson (graduate coordinator for MEd in Special Ed.), Johnnie Thompson, Anh Tran

Assistant Professors: Alan Aagaard, Daniel Bergman, Judith Hayes, Peggy Jewell, Fuchang Liu, Kim McDowell, Candace Wells

Degrees and Areas of Specialization

The department of curriculum and instruction offers courses of study leading to the Master of Education (MEd) in curriculum and instruction and the MEd in special education (adaptive, early childhood unified, functional, and gifted). A Master of Arts in Teaching (MAT) is offered for students seeking an initial license through an alternative licensure program. For those already holding a teaching certificate or license, C&I offers endorsements in reading, ESOL, library media, and special education areas (adaptive, functional, and gifted). For those licensed in elementary education, an early childhood unified endorsement is also available.

Admission Requirements

In addition to the Graduate School admission requirements, students seeking the MEd in curriculum and instruction must meet both of the following criteria:

1. Show potential to do graduate work by meeting one or more of the following:
   a. Graduate from the WSU teacher education program with a minimum GPA of 2.750 in the last 60 credit hours; or
   b. Graduate from an NCATE accredited program with a 3.000 or better GPA in the last 60 credit hours; or
   c. Take the Graduate Record Exam and score a minimum of 917 on any two of the subtests, or take the Miller Analogies Test, and score a minimum of 40; or
   d. Provide alternative evidence that documents academic aptitude.

2. Provide evidence of involvement in curriculum development or teaching.

The special education degree with an emphasis in adaptive, functional, and gifted is available for individuals certified at the elementary and/or secondary level (K–9, 7–12, or K–12) or licensed to teach children (early childhood through late childhood, late childhood through early adolescence, or early adolescence through late adolescence and adulthood). The special education degree with an emphasis in early childhood unified is also available for individuals who are certified to teach young children (birth to age 8). Admission requirements include:

1. GPA of 3.00 or higher in the last 60 hours; or GPA of at least 2.750 and GRE score on the two subtests indicated below that yields an index of at least 5.4 computed by the following formula:
   \[
   \text{GPA + \left( \frac{\text{GRE Verbal} + \text{GRE Quantitative}}{2} \right)} = 400
   \]

2. Full admission to WSU Graduate School

3. Current teaching certificate/license (or eligible for a certificate/license)

Applications are evaluated when received for the MEd in special education. Only a limited number of students are accepted into this program each year.

In addition to the above requirements, students in the MAT program must have an undergraduate degree in a content licensure field (i.e., biology, chemistry, mathematics, etc.) and meet...
eligibility requirements for a Kansas State Department of Education (KSDE) restricted license. This practice-to-theory model requires students to have a signed teaching contract from an accredited school district to be eligible for a restricted license and to participate in coursework.

**Master of Education Requirements**

The Master of Education (MEd) in curriculum and instruction is a 36-credit-hour program. The program is a site-based delivery model, which includes 24 credit hours of instruction at a specific site, offered one night per week, or online, two semesters for two years. Students also complete a 12-credit-hour specialization, selected to meet their needs and interests. Within the 24 credit hours at the site are 4 credit hours in a thesis or portfolio option, selected by the student.

The MEd in special education may be earned under a thesis, research portfolio, or evidence-based inquiry portfolio option. Each option requires 34–36 credit hours (gifted—34 hours; early childhood unified—36 hours; adaptive and functional—36 hours) of coursework, practical experience, a written comprehensive examination, and the culminating experience (i.e., thesis, research portfolio, or evidence-based inquiry portfolio).

Candidates may elect to complete only an endorsement in an emphasis area (adaptive, early childhood unified, functional, or gifted) in the special education program (adaptive and functional—29 graduate hours, early childhood unified—24 hours, gifted—27 hours).

**Master of Arts Requirements**

The Master of Arts in Teaching (MAT) in curriculum and instruction is a 36-credit-hour program. The program is offered for students seeking an initial license through an alternative licensure program. The core curriculum consists of 21 hours of child/adolescent development and pedagogy, 11 hours of research and reflection and 4 hours of internship with university supervisors provided. Within the 11 hours of research, students are required to complete a 4-hour action research portfolio.

**Graduate Certificate in Educational Technology**

This program offers information and communication technology training to educators who wish to advance their knowledge of information technology in education, integrate technology into classroom instruction, and use technology for communication and professional productivity. While providing documentation that educators have achieved some expertise in the information and communication technology area, it can assist those seeking such positions as technology coordinator in a school. The 15 hours of courses or workshops cover basic skills, integrating information and communication technology skills and subject matter-specific topics to address the changing needs of educators.

**Graduate Certificate in Literacy**

This program provides graduate level studies in literacy for educators who wish to (a) advance their knowledge and skills of teaching literacy in the classroom, and (b) integrate literacy into all content areas. It provides advanced study for teachers and educators seeking lead positions in buildings where literacy is a focus for federal legislation and state accreditation. To meet the varied needs of elementary and secondary teachers, two strands are provided: (1) early childhood/elementary, and (2) middle level/secondary. In each strand, students must take 15 hours of coursework; 9 hours of required coursework and 6 hours of electives. No more than 5 hours can be included that are graded S/U.

**Graduate Certificate: National Board for Professional Teaching Standards**

The graduate certificate in National Board for Professional Teaching Standards (NBPTS) is designed to (1) provide a systematic program of study for assisting experienced Kansas licensed teachers in Wichita State University’s service area to prepare for National Board Certification; (2) provide graduate study for educators desiring to research and apply their knowledge of the content they teach; (3) provide graduate study for educators to research and apply their knowledge of general and subject-specific methods for teaching and evaluating student learning; (4) provide graduate study for educators to research and apply their knowledge of students and human development; (5) provide graduate study for educators to research and apply their skills in effectively teaching students from racially, ethnically, and socio-economically diverse backgrounds; and (6) provide graduate study for educators to research and apply their skills, capacities and dispositions to employ such knowledge wisely in the interest of students.

The NBPTS seeks to identify and recognize accomplished teachers who effectively enhance student learning and demonstrate the high level of knowledge, skills, abilities and commitments reflected in the following five core propositions:

• Teachers are committed to students and their learning.

• Teachers know the subjects they teach and how to teach those subjects to students.

• Teachers are responsible for managing and monitoring student learning.

• Teachers think systematically about their practices and learn from experience.

• Teachers are members of the learning community.

Students complete 15 hours of coursework, including 12 hours of required coursework, and three hours of electives selected in consultation with their adviser. The elective hours should address areas that could be strengthened in the students’ background and preparation.

**Courses for Graduate/Undergraduate Credit**

CI 501. Professional Writing for Educators (1–3). Helps students learn the writing skills, techniques and typical procedures required for developing manuscripts for possible publication in the field of education. Addresses manuscripts for a variety of publication outlets.

CI 505. Science, Technology, and Society (1). Investigates the relationships between science and technology, and the effects of both on our past and present society/culture.

CI 541. Desktop Publishing I (3). Desktop publishers control the entire publishing process, from creation and typesetting to printing and distribution, with desktop equipment. Word processing on the personal computer and laser printing are the two technological achievements that make possible a desktop publishing revolution. Stresses type design, harmony, legibility, copy fitting, and layout fundamentals.

CI 542. Desktop Publishing II (3). An intermediate-level course which enhances, enriches, and develops further skills and techniques used in desktop publishing. Students select software packages in which they need additional depth toward master-level. Prerequisite: CI 541.

CI 603. Foundations of Early Childhood Unified (2). An introduction to working with young children (including those developing normally, those at risk due to environmental and biological issues, and those with special needs), their families, and professionals in community schools, agencies, and programs. Emphasizes professional development, positive dispositions, early childhood learning environments, and early childhood professional standards. Examines the ECU professions, characteristics of good teaching, the nature of teacher education, and basic historical and philosophical foundations of ECU education. Prerequisites: CI 271 and 272.

CI 611. Collaboration/Teaming: Families, Professionals & Community Members (3). Provides students with the dispositions, experiences, knowledge, and skills required of professionals who work in collaboration/teams with families, professionals in educational and developmental settings, and paraprofessionals. Prerequisites: CI 271 and 272.

CI 614. ECU Assessment & Methods: Infants, Toddlers, and Families (3). Provides knowledge, skills, and dispositions for candidates regarding developmental principles, evaluation/assessment, and the development
of services, supports, and accommodations for infants/toddlers (birth through age 2) and their families. Includes competencies within both the early childhood and early childhood special education fields. Prerequisite: CI 603. Corequisite: CI 614 (undergraduates only).

CI 614I. ECU Presudent Teaching: Infants, Toddlers and Families (2). Candidates participate in presudent teaching opportunities located in natural settings (e.g., within homes and the community) that include young children from birth through age 2 and their families. Candidates work with a cooperating teacher, other professionals, and a university supervisor to plan, implement, and assess services and supports for young children and their families. Prerequisite: CI 603. Corequisite: CI 614 (undergraduates only).

CI 615. Learning and Reading Strategies (3). Students are provided with the understandings of the development of learning and reading strategies and explore instructional approaches for guiding secondary students in those strategies and their use in content areas.

CI 616. Literature for Adolescents (3). Students participate in extensive reading of literature in all genres consistent with studies of adolescents’ reading interests, abilities, and responses to literature. Prerequisite: acceptance into teacher education. Currently and previously certified teachers meet prerequisites.

CI 617. ECU Assessment & Methods: Preschool (3). Provides knowledge, skills, and dispositions for teacher candidates regarding development and learning at the preschool level (ages 3–5). Candidates learn to link theory and evidence-based practices to the preparation of the learning environment, the curriculum, and instructional methods that are appropriate for all children. Includes methods of screening and evaluation, adaptations and accommodations, and interventions to meet individual child needs, including those with exceptionalities. Prerequisite: CI 603. Corequisite: CI 617P (undergraduates).

CI 617P. ECU Presudent Teaching: Preschool (2). Candidates participate in presudent teaching field-based experiences in preschool settings that include children from ages 3–5. Candidates work with cooperating teachers, other professionals, and a university supervisor to plan, implement, and assess services and supports for young children. Prerequisite: CI 603. Corequisite: CI 617 (undergraduates).

CI 620. Assessment & Methods: K–3 (3). Provides knowledge, skills, and dispositions for candidates working with families and young children from kindergarten through grade three. Covers theory, methodology, screening, evaluation, assessment, and instructional practices, including adaptations/modifications/assistive technology of general education curriculum/instruction for young children both with and without delays/diagnosed disabilities. Prerequisites: CI 603, and at least one of the following: CI 402L, 402S, 402L, or 402M; or hold an elementary teaching license.

CI 621. Instructional Strategies: Middle-Level Education (3). Students examine the middle grades school as an organization that takes its design specifically from the analysis of 10–14-year-olds, their characteristics and needs. Students examine many curricular and instructional alternatives for middle grades education and learn to manage changes.

CI 647A. Student Teaching ECI: K–3 (8). Candidates spend a semester in professional settings (K–3 level) working with a cooperating teacher and university supervisor. The candidate and cooperating teacher, with the approval of the university supervisor, devise a plan for the student teacher to assume full responsibility for the program/classroom for a designated period of time during the semester. Prerequisites: CI 614, 617, 617P, 620, successful completion of all Core I and II courses and assessments and acceptance into clinical practice.

CI 647B. Student Teaching ECI: Birth–PreK (4). Candidates spend a semester in educational settings (infant/toddler level or preschool level) working with a cooperating teacher and university supervisor. The candidate and cooperating teacher, with the approval of the university supervisor, devise a plan for the student teacher to assume full responsibility for the program/classroom for a designated period of time during the semester. Prerequisites: CI 614, 617, 617P, 620, successful completion of all Core I and II courses and assessments and acceptance into clinical practice.

CI 654. Middle Level/Secondary Strategies (3). E-English, J-History, M-Mathematics, S-Science. Acquaints educators with teaching techniques and assessment tools specifically tailored to the needs of students in the middle level (grades 5–8) and secondary (grades 6–12) education. Intended for individuals who hold a teaching license and who wish to add middle level or secondary subject endorsement. Prerequisite: teaching certificate or license.

CI 701. Foundations of Education (3). Students survey the various foundations areas, including philosophical, historical, social, and comparative. This course is prerequisite to subsequent foundations courses. Prerequisite: graduate standing.

CI 702. Introduction to Exceptional Children (3). A survey of the characteristics of exceptional learners, including the handicapped and the gifted. Presents service delivery models and current practices. Fulfills certification requirements for teachers and serves as an introductory course in exceptionality for special education majors, administrators, and school psychologists. Prerequisite: bachelor’s degree or departmental consent.

CI 705. Knowledge and Beliefs About Reading (3). Helps students understand the theories of reading development, individual student differences, the nature of reading difficulties, and principles of assessment. Includes the standards developed by the International Reading Association concerning knowledge and beliefs about reading as the learning outcomes. Prerequisite: graduate standing.

CI 706. Reflective Inquiry into Learning, Teaching, and Schools (5). Fosters the reflective thinking ability of teachers about the relationships among learning, teaching, and schools. Explores various frameworks of growth and development, learning theory, social and multicultural education, and philosophical foundations. Students are engaged in initial reading and investigation into individualized research topics. Prerequisites: admission to graduate school, CESP 701.

CI 708. Current Topics in Curriculum (1–3). Address a broad range of topical issues in curriculum development and implementation. A current issue is covered under this course number, an umbrella number for a variety of topics/innovations in curriculum. Repeatable.

CI 709. Current Topics in Instruction (1–3). Addresses a broad range of topical issues in current practices for effective instruction. A current issue is covered under this course number, an umbrella number for a variety of topics/innovations in instructional practices. Repeatable.

CI 711. Multicultural Education (3). Emphasizes students understanding multiple perspectives in a global society and developing multiple modality, culturally aware curriculum experiences. Disciplined inquiry and critical experience “to become more responsive to the human condition, cultural integrity, and cultural pluralism in society” (NCATE, 1982, p. 14). Emphasizes diversity issues in education and the development of a knowledge base to support culturally responsible pedagogy. Prerequisite: graduate standing or departmental consent.

CI 712. Environmental Education (3). Provides basic information on environmental issues which can be addressed in the classroom. Become familiar with a wide range of resources for both teachers and their students. Stresses applying environmental issues to everyday teaching.

CI 714. Reading Instruction and Assessment (3). Helps students create instructional environments; teaches phonemic awareness, word identification (including phonics), vocabulary-building skills, strategies for comprehension and the construction of meaning, reading and writing fluency, and study strategies; and assesses student performance and progress. Prerequisite: CI 705 or departmental consent.

CI 716. Introduction to the School Library (2). An introduction to the role of the library and the library teacher in the school. An overview of issues affecting libraries and library teachers is presented. Prerequisite: teacher certification/license.

CI 717. Qualitative Inquiry in Education (3). Through readings and guided experiences in acts of inquiry in qualitative research, students acquire the disposition of a reflective inquirer, becoming familiar with the knowledge base for qualitative inquiry. Prerequisite: instructor’s consent.

CI 718. Acts of Qualitative Inquiry in Education (3). Through guided experiences and fieldwork in acts of inquiry in qualitative research, graduate students develop and employ the skills of the reflective, qualitative inquirer. Prerequisite: CI 717 or departmental or instructor’s consent.

CI 719. Foundations of Special Education (1). Addresses the basic foundations of special education across exceptionality areas. Discusses a general history of special education and its relationship to general education trends (as well as the disability movement as a whole). Covers important special education legislation and regulations, the role litigation has played in the development of the discipline, and ethical issues in the provision of special education services. The continuum of services are explored along with roles/responsibilities of special and general educators in relation to students with exceptionalities, especially within inclusive settings. Prerequisite: acceptance into teacher education or completion of a teacher licensure program in general education. Corequisite: CI 720 or 722.
CI 720. Characteristics: Adaptive/Functional Learning Needs (2). Explains the cognitive, communicative, social/emotional, sensory, and physical characteristics of students with mild to severe disabilities and how these characteristics influence planning and instruction. Examines roles of students, professionals, and families in meeting student needs. Discusses current developments in the field of special education that pertain to working with students with adaptive and functional learning needs. Prerequisites: CI 311, 320, and acceptance into teacher education or completion of a licensure program in general education. Corequisite: CI 719.

CI 722. Characteristics: Gifted Learning Needs (2). Introduces the field of gifted education. Explores theories of intelligence, identification, characteristics and learning needs, special populations, curriculum differentiation, and underachievement. Prerequisites: CI 311, 320, and acceptance into teacher education or completion of a licensure program in general education. Corequisite: CI 719.

CI 724. Methods/Assessment: Adaptive (3). Examines introductory assessments, curriculum, and instruction related to students with mild and moderate learning needs. Includes competencies for (a) developing individual educational plans, (b) assessment for instructional planning, (c) planning and delivering research-validated individualized instruction, (d) monitoring and basing instructional decisions on performance data, (e) managing safe and conducive learning environments, and (f) strategies for working with students with adaptive learning needs in general and special education environments. Prerequisites: CI 719, 720, or instructor's consent.

CI 725. Improvement of Instruction in Science (3). Assists teachers in improving the way they teach science and the way their students learn science. Includes instructional strategies, curriculum, research, and technology. Prerequisite: CI 402S or 454S.

CI 726. Information Technologies in the School Library I (2). Introduces a wide range of computer applications, including word processing, database, spreadsheet, and presentation software to create and manage information in the library. Covers the use of the Internet, options for filtering Internet content, Internet user policies, and basic Web page design. Includes basic computer and software troubleshooting, installation and removal of software, and computer security issues. Prerequisite: Windows 95 or equivalent skills, CI 716.

CI 727. Technology in the School Library II (2). An introduction to a wide range of technologies and equipment in the school library. Covers selection and purchase as well as basic maintenance and repair of equipment. Includes the basis of local area network design. Students learn the basics of media production and strategies for teaching media production to students. Students also look at the future of technology in school libraries. Prerequisite: CI 726.

CI 728. Cataloging (2). An introduction to cataloging materials for the school library. Includes cataloging print and non-print materials in US MARC format; assigning Dewey Decimal Classification Numbers; assigning Library of Congress Subject Headings; sources for cataloging records, the importance of authority control in the library.

CI 729. Reference Materials & Collection Development (2). Provides students with skills in evaluating and selecting library materials. Presents methods of evaluating and using indexes, bibliographies, encyclopedias, dictionaries and other print and electronic media, including the Internet.

CI 730. Curriculum in the School Library (2). Comprehensively designed to give students knowledge about the role of the school library in the curriculum development process. Addresses how the school library teacher collaboratively develops and integrates information literacy and content area standards into library and classroom activities. Prerequisite: CI 716.

CI 731. The Reflective and Inquiring Educator (6). Builds a foundation for reflective thinking about (a) the role of the educational practitioner; (b) educational issues in curriculum, instruction, and change theory; and (c) principles and application of teacher-based action research. Prerequisite: admission to MEd in curriculum and instruction.

CI 732. Library Management and Design (2). An introduction to a wide range of technologies and equipment in the school library. Covers selection and purchase as well as basic maintenance and repair of equipment. Includes the basis of local area network design. Students learn the basics of media production and strategies for teaching media production to students. Students also look at the future of technology in school libraries. Prerequisites: CI 716, 726, 728, 730.

CI 734. Literature-Based Reading Programs (3). Students examine specific methods for developing a literature program with children (preschool-elementary years) emphasizing extending literature and media through the reading environment, language arts, the arts, and creative expression. Prerequisites: CI 705, and graduate standing.

CI 736. Organizing a Reading Program (3). Helps students communicate information about reading to various groups, develop literacy curricula, participate in or lead professional development programs, participate in or conduct research, collaborate or supervise other literacy practitioners, communicate assessment results, and engage in professional activities. Prerequisites: CI 705, 714.

CI 737. Methods/Assessment: Gifted (3). Explores a variety of assessment instruments, both teacher-made and standardized, to determine a gifted student's cognitive functioning level and educational needs. Examines strategies and techniques for planning qualitatively differentiated curriculum to meet the academic needs of the gifted learner. Prerequisites: CI 719, 722, or instructor's consent.

CI 742. Methods/Assessment: Functional (3). Provides introductory assessment and methods of the learning and behavioral characteristics of individuals with severe and multiple disabilities from preschool through high school; explores implications for a comprehensive service delivery system, and trends in best practices, both current and historical. Required for entry into the Master's in Education—Special education (functional program). Prerequisites: CI 719, 720.

CI 743. Transition to Teaching Internship I (1). In the transition to teaching licensure program, this internship replaces the required student teaching assignment for the purposes of licensure. Students teach half time or more with a provisional license. Prerequisites: CI 740A, employment by a school district and completion of coursework for restricted teacher licensure. Corequisite: CI 768.

CI 744. Transition to Teaching Internship II (1). In the transition to teaching licensure program, this internship replaces the required student teaching assignment for the purposes of licensure. Students teach half time or more with a provisional license. Prerequisites: CI 743, 761A, employment by a school district and completion of coursework for restricted teacher licensure. Corequisite: CI 769.

CI 746. Alternative Certification Internship III and IV (1). Continuation of CI 743 and 744. Prerequisites: employment by a school district, CI 743 and 744, and admission to MEd in CI.

CI 747L. Practicum: ESL/Bilingual Education (K–12 or adult) (3). Provides full-time participation in an ESL class supervised by a master teacher and a university professor. Focuses on the application of teaching methods for ESL/bilingual learners, the appropriate use of formal and informal assessment procedures, the development of cross-cultural teaching strategies, and the integration of language with content-area instruction. Prerequisites: CI 321 or 711, CI 774, 775, 776, and 777.

CI 748. Transition to Teaching Internship III (1). In the transition to teaching licensure program, this internship replaces the required student teaching assignment for the purposes of licensure. Students teach half time or more with a provisional license. Prerequisites: CI 743, 769, employment by a school district, and completion of coursework for restricted teacher licensure. Corequisite: CI 488.

CI 749. Transition to Teaching Internship IV (1). In the transition to teaching licensure program, this internship replaces the required student teaching assignment for the purposes of licensure. Students teach half time or more with a provisional license. Prerequisites: CI 748, employment by a school district, and completion of coursework for provisional teacher certification. Corequisite: CI 748.

CI 749A. Practicum: Adaptive (3). Provides prospective special education teachers with participation in a class for children or adolescents with adaptive learning needs being served in special education programs. Supervision is provided by a fully-qualified special
education teacher and a university faculty member. Emphasizes: (a) research-validated teaching methods for students with adaptive learning needs, including planning individual education programs and standards-based education; (b) use of formal-informal psycho-educational assessment devices, curriculum strategies, positive behavior support, behavior management, and evaluation of student performance; and (c) reflective analysis of personal performance and its impact on student learning. Prerequisites: CI 719, 720, 724, and practicum placement approval.

CI 749F. Practicum: Functional (3). Provides supervised practical experience in a program setting that serves students who have low-incidence disabilities. Candidates work with a cooperating teacher to plan, implement, and assess instruction aligned with state and/or district standards for students with low-incidence disabilities. Prerequisites: CI 719, 720, 742, and practicum placement approval.

CI 749G. Practicum: Gifted (3). Provides prospective special education teachers with participation in an educational setting for children and adolescents with needs for gifted curriculum served in special education programs. Supervision is provided by a fully-qualified gifted education teacher and a university faculty member. Emphasis is placed upon research-validated teaching methods for students with gifted curriculum needs. Prerequisites: CI 719, 722, 737, and practicum placement approval.

CI 750. Workshops in Education (1–4).

CI 751, 752, 753, 754, or 755. Special Studies in Education (1–3). For elementary and secondary school teachers. Repeatable with adviser’s consent. Prerequisite: teacher certification or departmental consent.

CI 756. Introduction to the National Board Certification Process (2). Participants study the five core propositions of the National Board for Professional Teaching Standards: (1) teachers are committed to students and their learning; (2) teachers know the subjects they teach and how to teach those subjects to students; (3) teachers are responsible for managing and monitoring student learning; (4) teachers think systematically about their practice and learn from experience; and (5) teachers are members of learning communities. Participants are introduced to the standards for their certificate area, should they choose to pursue national board certification, analyze small group and whole class videos, and complete a self-assessment to determine personal strengths and weaknesses and the degree to which they are prepared to pursue national board certification.

CI 757. School Library Media Internship I (2). The first of a two-semester internship required by the state of Kansas to qualify for endorsement as a professional licensed library media specialist. Provides the candidate with experience as a library media specialist. Candidates are expected to provide evidence for meeting all licensure standards required of library media specialists. Prerequisites: Kansas conditional endorsement as a library media specialist, master’s degree, Kansas five-year teaching license.

CI 760A. Creating an Effective Classroom (3). Part of the core for restricted licensure in the transition to teaching licensure program. Participants conduct an initial examination of instructional methods, educational trends, and effective practices for classroom management. Prerequisites: admission to the transition to teaching program. Student will have secured (or have been cleared to secure) a teaching contract in an accredited school system.

CI 761A. Instructional Planning (2). In the transition to teaching licensure program, this course addresses issues in instructional planning including identifying appropriate learner goals, aligning goals with accepted standards, models of instruction, adapting instruction to meet individual student needs, and differentiated instruction. Prerequisites: employment by a school district and completion of coursework for restricted license. Corequisite: CI 743.

CI 763. Preparing for the National Board for Professional Teaching Standards Certification Process (1). Candidates analyze national board standards specific to their certification areas and identify personal strengths and weaknesses in relation to those standards. Candidates determine a plan for completing four draft portfolio entries during the fall semester of the upcoming school year. Prerequisite: CI 756.

CI 766. NBPTS: Professional Portfolio Development (3). Taken during the fall semester of the year in which a teacher is a candidate for National Board Certification. Candidates design and present units and evaluate student work that could be used for their portfolio. As part of the process, candidates identify and analyze relevant student work samples and make videotapes of themselves engaged in both whole group and small group instruction. Emphasis is placed on two areas: (a) helping candidates organize themselves so that they increase their chances of success at earning first-time certification; and (b) learning to engage in the critical self-analysis necessary to produce clear, consistent, and convincing evidence that their work is accomplished. Emphasis is placed on professional writing. Prerequisite: CI 756.

CI 767. NBPTS: The Assessment Process (3). Taken during the spring semester of the year in which a teacher is a candidate for National Board Certification. Candidates complete and submit their portfolios to the national board for assessment. Candidates also prepare for the assessment center tests. Prerequisite: CI 756.

CI 768. National Board Certification: Facilitating Accomplished Practice (3). Capstone course. Candidates prepare a portfolio of at least two teaching units for the courses they teach that are fully integrated with the standards of the national board. Portfolio units may be added to an electronic professional library of the College of Education. Candidates identify key topics for staff development in consultation with school leadership that support the CIP of their respective schools and develop workshop or in-service sessions for colleagues. Emphasizes the development of instructional leadership skills to achieve these goals. Candidates may, at the discretion of the university adviser, teach a university-sponsored workshop or course in lieu of developing a school district sponsored professional development session. Professional collaboration and life-long learning are emphasized. Prerequisite: CI 760A and 767.

CI 769. Instructional Strategies and Assessment (2). In the transition to teaching licensure program, this course allows the student to explore a variety of instructional strategies and assessment techniques while learning how to adapt these strategies and techniques to meet individual needs. Prerequisites: CI 743, 761A, 768, and continued employment by a school district. Corequisite: CI 744.

CI 771. Technology in the Classroom (2). Introduces classroom teachers to new technologies and their use in the classroom. Uses field trips and speakers to expose teachers to leaders in specific technology. Includes telecommunications, multimedia applications, integrated media, and new hardware and operating systems. Prerequisite: instructor’s consent.

CI 772. Integrating Technology into the Curriculum (3). Covers skills and strategies needed for classroom teachers to use computers and computer-related technologies to meet curricular goals and professional standards. Includes professional standards, classroom management, choosing appropriate software, assessment, teaching strategies and activities, and professional resources. A project-based course; educators develop materials and strategies to assist in integrating available technology into the curriculum.

CI 774. Teaching English as a Second Language (3). Examines current objectives for teaching English as a second language and a variety of methods and specialized techniques for obtaining these objectives. Students will develop knowledge of criteria for evaluating curricula, teaching materials and professional literature related to teaching English as a second language and bilingual education. Students examine methods of selecting and adapting curricular ways to enhance the curriculum through developing activation plans for involving parent and community resources in the ESL/BE curriculum. Designed to meet the standards required for ESL/BE endorsement or certification in TESOL.

CI 775. Applied Linguistics: ESL/Bilingual Teacher(s) (3). Examines a broad picture of human language: what it is, what it is used for, and how it works. Enables students to recognize uninformative statements about language, to examine personal beliefs and attitudes about language, and to learn to use basic tools to analyze language in particular as it relates to teaching English as a second language. Provides an introduction to most of the sub-fields of linguistics (e.g., phonetics, morphology, semantics, syntax, etc.).

CI 776. Second Language Acquisition (3). Surveys nativist, environmentalist, and interactionist theories of second-language acquisition. Covers a broad introduction to the scope of second-language acquisition and bilingualism by reviewing substantive research findings as well as causes for differential success among second-language learners. Includes discussions over readings, collaborative activities, and presentations involving application of theory to teaching practice.

CI 777. ESL Assessment (3). Examines legal, theoretical, and practical considerations in the ESL/BE students. Explores a variety of established principles of language assessment, procedures for identification of language-minority students, and applications for these procedures and techniques. Covers level placement, monitoring of language development, and exit criteria for language programs. Introduces the desirable qualities of tests: validity, reliability, practicality, and beneficial backlash.

CI 780C. Technology and the Classroom: Young Children (2). Teaches effective use of a variety of hardware, software, and peripherals in early childhood classroom settings (ages 3–9, Grades PreK–3). Prerequisites:
enthrance into teacher education, a valid teaching certification, or instructor's consent.

CI 780L. Technology in the Classroom: Language Arts (2). Enables classroom teachers to use computers and related technology in the language arts curriculum. Appropriate software is evaluated and used in planning for instruction.

CI 780M. Technology in the Classroom: Mathematics (2). Focuses on the integration of information and communication technology in mathematics. Explores mathematics-related software and online resources, instructional strategies, and assessment techniques. Strongly focuses on the use of technology to meet the subject matter and technology and curriculum standards. Emphasizes building a community of reflective learners. Prerequisites: entrance into teacher education, valid teacher certificate/license, or instructor's consent.

CI 780S. Technology in the Classroom: Science (2). Assists teachers of science in integrating the use of technology appropriate for their classrooms. Explores software and online resources, instructional strategies, and assessment techniques. Strongly focuses on the use of technology for communication and student assistance to meet the science and technology curriculum standards. Emphasizes building a community of reflective learners. Prerequisites: entrance into teacher education, valid teacher certificate/license, or instructor's consent.

CI 781. Cooperative Education (1–4). Provides the candidate a work-related placement that integrates theory with a planned and supervised professional experience designed to complement and enhance the student's academic program. Offered Cr/NCr only. CI graduate candidates are limited to any combination of 6 hours of pass/fail, S/U, and Gr/Not Gr credit toward the degree program.

CI 782. Internet in the Classroom (3). Project-based course requires students to identify Internet resources that best meet classroom curricular goals and plan instruction using those resources. Assumes all enrolled students have basic computing skills prior to enrolling in this class and access to a computer connected to the Internet.

CI 783. Special Projects in Internet (1). Students explore and expand their knowledge of the Internet. They complete a special project designed to use knowledge and experiences developed in CI 782. Students and instructor establish goals and activities appropriate for graduate-level study and applicable in an educational setting. Prerequisite: CI 782 or instructor's consent.

CI 786. Beginning Algorithms and Problem Solving (2). Introduces basic algorithms and principles of computer programming.

CI 790. Special Problems in Education (1–4). Directed reading, activity, or research under supervision of a graduate instructor. Prerequisite: departmental consent.

CI 791. Practicum: Methods of Computer-Related Instruction (2). Investigate teaching and learning strategies related to the use of computers in the classroom. Includes the design and management of instructional activities related to software integration, programming, and the development and assessment of computer-related student competencies. Students are supervised in the field while they apply methods and principles of computer-related instruction. Prerequisite: CI 772 or departmental consent.

CI 793. Multimedia in the Classroom (2). Prepares educators to plan and create multimedia presentations. Includes digitizing audio and video, storyboards, scripting, appropriate hardware, and authoring software.

Courses for Graduate Students Only

CI 804. Classroom Research in Curriculum and Instruction (6). Guides students in formulating questions and using appropriate research principles to collect, analyze, interpret, and report data to evaluate the effectiveness of educational policies and/or practices. Sustained exploration of topics from CI 731 expected. Prerequisite: CI 731.

CI 811. Family and Professional Collaboration (2). Assists the special educator in developing the skills to collaborate and consult with parents/family members, general educators, support personnel, paraprofessionals/teaching assistants, and community agencies to facilitate the needs of children with exceptionalities. Prerequisites: CI 749A, 749F, or 749G. Corequisite: CI 811A.

CI 811A. Internship/Practicum: Collaboration (1). Provides a supervised opportunity for candidates to practice the skills of collaboration with parents/family members, other professionals, paraprofessionals/teaching assistants, and community members. Prerequisites: CI 749A, 749F, or 749G. Corequisite: CI 811A.

CI 812. Transition Across the Life Span (2). Examines aspects of transition programming for individuals with exceptionalities across their life span. Addresses transitions from (a) early childhood special education settings to the school environment, (b) elementary to middle school, (c) middle school to high school, (d) one special education setting to another (e.g., self-contained classroom to resource room or general education classroom), and (e) high school to post-secondary settings and independent functioning. Discusses roles of individuals with exceptional learning needs, parents, educators, and community personnel. Prerequisites: CI 749A, 749F, or 749G.

CI 814. Advanced Methods: Gifted (2). Develops strategies and techniques, including technology, for planning qualitatively differentiated curriculum to meet the unique academic needs of the gifted learner. Prerequisites: CI 749G. Corequisite: CI 814A.

CI 814A. Internship/Practicum: Advanced Methods Gifted (1). Provides a supervised opportunity for students to implement and evaluate differentiated curriculum for gifted learners. Prerequisite: CI 749G. Corequisite: CI 814.

CI 815. Advanced Methods: Adaptive (2). Develops strategies and techniques related to the individual needs of learners identified with mild disabilities including ensuring access to the general education curriculum, environments and extracurricular activities through adaptations, modifications, and use of technology. Corequisite: CI 815A.

CI 815A. Internship/Practicum: Advanced Methods Adaptive (1). Provides a supervised opportunity for students to implement and evaluate learning experiences and curricula that develop the cognitive potential of learners with adaptive learning needs and their accessibility to the general education curriculum. Corequisite: CI 815.

CI 816. Advanced Methods: Developing Critical and Creative Thought (2). Develops understanding of cognitive and creative thinking to construct learning experiences that challenge the cognitive and creative potential of gifted learners. Prerequisite: CI 749G. Corequisite: CI 816A.

CI 816A. Internship: Developing Critical and Creative Thought (1). Provides a supervised opportunity for students to implement and evaluate curricula that challenges the cognitive and creative potential of gifted learners. Prerequisite: CI 749G. Corequisite: CI 816.

CI 817. Language to Literacy: Meeting Needs of Students with Disabilities (2). Provides content relevant to language development and disorders that impacts educational achievement of students with special education classifications. This includes oral and written communication, emergent literacy and reading. Candidates learn how to apply educational interventions that are effective in meeting the language and literacy needs of students. Specifically, candidates learn appropriate instructional strategies for teaching oral language, reading, and written expression. An emphasis on the principles of information processing as they apply to effective instructional procedures is stressed. Prerequisite: CI 749A. Corequisite: CI 817.

CI 817A. Internship/Practicum: Language to Literacy (1). Provides supervised opportunity for students to evaluate and implement learning experiences, including application of educational interventions that are effective in meeting the language and literacy needs of students. In addition, candidates implement educational interventions that are effective in meeting the language and literacy needs of students as well as implementing appropriate strategies for teaching oral language, reading, and written expression. Prerequisite: CI 749A. Corequisite: CI 817.

CI 818. Positive Behavior Supports and Social-Emotional Methods (3). Develops knowledge and skills for conducting a functional behavior assessment and positive behavior support plan needed by classroom teachers to affect academic and social-emotional outcomes. Addresses connections of challenging behaviors to aspects of the learner's (a) environments, (b) cultural diversity, (c) developmental and academic skills, and (d) physiological needs. Corequisite: CI 818A.

CI 818A. Internship/Practicum: Positive Behavior Supports (1). Provides a supervised opportunity for candidates to evaluate and implement positive behavioral supports for students with challenging behaviors, including functional assessment of problem behavior, design and implementation of behavior plans, and provision of ongoing positive behavior supports. Prerequisite: one of the following courses—adaptive, CI 749A; functional, CI 749F; gifted, CI 749G; and full admission to the special education program. Corequisite: CI 818.

CI 819. Nonsymbolic & Symbolic Communication (2). Develops strategies and techniques for assessing, designing, and delivering instruction in order to meet the unique communication needs of learners with severe and multiple disabilities. Prerequisite: CI 749F. Corequisite: CI 819A.

CI 819A. Internship/Practicum: Communication (1). Provides a supervised opportunity for candidates to evaluate and implement nonverbal and verbal communication
strategies for students with functional learning needs. Prerequisite: CI 749F. Corequisite: CI 819.

CI 820. Advanced Methods: Functional (2). Develops strategies and techniques, including assistive technology, related to curriculum, instruction, and planning of the learning environment within the functional curriculum. Imparts knowledge, skills, and dispositions needed to meet the diverse cognitive, physical, social, and emotional needs of students with severe and multiple disabilities. Prerequisites: CI 742, 749F, and full admission into the special education—functional program. Corequisite: CI 820A.

CI 820A. Internship/Practicum: Advanced Methods Functional (1). Provides a supervised opportunity for candidates to evaluate and implement learning experiences, including curriculum planning, environmental arrangements, instructional delivery, and use of assistive technology, that develops cognitive, physical, social, and emotional needs of students with severe and multiple disabilities. Prerequisites: CI 742, 749F, and full admission into the special education—functional program. Corequisite: CI 820.

CI 821. Classroom Reading Practicum (3). Students participate in a practicum experience, delivering developmental and corrective reading instruction in a classroom setting. Prerequisite: CI 705.

CI 822. Evaluation/Diagnosis (2). Applies standardized and informal evaluation techniques including critical evaluation of standardized tests, their appropriateness for special populations (including school-age individuals with exceptionalities and reading disabilities as well as young children and culturally and linguistically diverse learners), and alternative methods of assessment and intervention techniques based on diagnostic profiles. Prerequisites: CI 749A, 749F, or 749G.

CI 824. Reading Internship I (2). The first of a two-semester internship required by the state of Kansas to qualify for endorsement as a professionally licensed reading specialist. The intern has a university supervisor and an employing school district-appointed mentor who is a licensed reading specialist. A minimum of two visits from both the university supervisor and mentor as well as additional communications occur. Provides the candidate with experience as a reading specialist. Candidates are expected to provide evidence of meeting all licensure standards. Prerequisites: CI 736, Kansas conditional endorsement as a reading specialist.

CI 825. Reading Internship II (2). The second of a two-semester internship required by the state of Kansas to qualify for endorsement as a professionally licensed reading specialist. The intern has a university supervisor and an employing school district-appointed mentor who is a licensed reading specialist. A minimum of two visits from both the university supervisor and mentor as well as additional communications occur. Provides the candidate with experience as a reading specialist. Candidates are expected to provide evidence of meeting all licensure standards. Prerequisite: CI 824.

CI 835. Instructional Models and Practices (3). For teachers (1) to explore the theories behind the development of, and the syntaxes for viable instructional practices; (2) to apply instructional models to the analysis and evaluation of various learning environments; and (3) to develop a commitment as a reflective practitioner of more effective instruction through an expanded and integrated repertoire of teaching strategies. Prerequisites: admission to MEd in curriculum and instruction program, CESP 701.

CI 837. Collaborating and Refining Problem Solving Skills (4). This integrated class guides students in implementing school and classroom improvement practices that have documented success. Emphasizes collaboration skills in the identification, selection, and development of approved school and professional development projects. Prerequisite: CI 804.

CI 843. Leadership and Sustained Professional Growth (4). Emphasizes commitment to and application of professional leadership in curriculum and instruction and/or school improvement. Sustained exploration of topics from CI 731, 804, and 837 expected. Prerequisite: CI 837.

CI 845. Curriculum Models and Practices (3). Examines theories, development processes, evaluation procedures, and current practices in curriculum. Emphasizes multiple conceptual frameworks for thinking about curriculum and reflective inquiry into the implications of those frameworks in today's classrooms and schools. Prerequisites: admission to MEd in curriculum and instruction program, CESP 701.

CI 847. Practicum/Internship in Special Education (1–10). Provides students with participation in a class for early childhood handicapped (847A) supervised by a university professor, emphasizing applied teaching methods for students with mild exceptionalities, including formal/informal psychoeducational assessment devices, curriculum strategies, behavior management, and prescriptive remediation for academic deficits. Prerequisites: full admission to MEd program in special education and completion of all core courses needed for provisional endorsement in specialty areas.

CI 847A. Practicum/Field Experience: ECU (1–10). Provides supervised field experiences for candidates to evaluate and implement learning experiences, including curriculum planning, environmental arrangements, instructional delivery, and use of assistive technology that links to increased development in all domains. Experiences are assigned at three levels, infant-toddler, preschool, and K–3. Prerequisites: CI 614, 617 and/or 620, and full admission into the special education/early childhood unified program.

CI 847B. Practicum: School Libraries (2). Students pursue a professional experience in a school library media center under the cooperative supervision of an experienced practitioner in the field and a university supervisor. Prerequisite: CI 732.

CI 847C. Practicum: Cataloging (2–4). Students pursue a professional experience in a school library media center or central services office under the cooperative supervision of an experienced cataloger in the field and a university supervisor. Prerequisites: CI 728 and 847B.

CI 848. Analysis and Reflection (2). In the transition to teaching licensure program, this course introduces techniques for analyzing impact on student learning and effective reflection as well as requiring students to apply those techniques to specific learning environments. Prerequisites: CI 744, 760, and continued employment by a school district. Corequisite: CI 748.

CI 849. Practices and Trends in Action Research (2). In the transition to teaching licensure program, this course introduces techniques of action research as well as requiring students to apply these techniques to specific learning environments. Prerequisites: CI 748, 848, and continued employment by a school district. Corequisite: CI 748.

CI 851. Special Education Research (2). Students learn research methodologies from the field of special education. Students develop research questions, review relevant literature, and develop skills to conduct ethical research that leads to improvement in their educational practices. Prerequisites: CI 749A, 749F, or 749G.

CI 853. Improvement of Instruction in Language Arts (3). Students examine recent developments in the teaching of language arts in elementary and/or middle school grades: problems, concerns, methods, materials, and research related to listening and oral, written, and visual communication including "school" writing and creative writing. Students select particular concepts and related skills for special attention.

CI 855. Models and Practices of Curriculum and Instruction (6). Examines theories behind, the development of, current practices and trends in, and evaluation and assessment procedures pertaining to curriculum and instruction. Emphasizes multiple conceptual frameworks for thinking about curriculum and instruction, and reflective inquiry into the implications of those frameworks in today's classrooms. Prerequisite: CI 706.

CI 858. Issues in Special Education (1). Engages candidates in discussion and activities designed to promote critical thinking. Delves into the impact of important topics on the education of students with exceptional learning needs. Prerequisites: all courses within student emphasis area with the following exceptions—for evidence-based inquiry portfolio (CI 871/872); research portfolio (CI 873/874); or thesis (CI 875/876).

CI 860. Seminar on Research Problems (1–3). Helps MEd students formulate either an acceptable agenda for the development of a professional portfolio or an acceptable proposal for a master's thesis to satisfy the application requirements for the MEd in curriculum and instruction.

CI 862. Professional Portfolio Development (1–2). Students develop the professional portfolio in consultation with their portfolio advisor and two other faculty members. Prerequisite: CI 804, or 860.

CI 863. Presentation of Professional Portfolio (1–2). Students complete their portfolio, present it to their faculty portfolio committee, and orally defend the professional portfolio. Prerequisites: CI 862.

CI 864. Professional Research Preparation (1). Engages classroom teachers in a process of preparing an action research project. Participants analyze and draw conclusions from data and prepare data tables to summarize data. Prerequisite: CI 849.

CI 865. Professional Research Presentation (1). Participants summarize findings from an action research project and prepare a professional presentation to report those findings. Prerequisite: CI 849.

CI 868. School Library Media Internship II (2). The second of a two-semester internship required by the state of Kansas to qualify for endorsement as a professionally
and at least one methods class: CI 614, 617, or 620.

Early Childhood Special Education. Prerequisites: CI 603 seminars in early intervention offered periodically to facilitate the education of young children.

CI 871. Evidence-Based Inquiry Portfolio Proposal (2). Special education degree candidates/students develop a research-based inquiry proposal as a process for increasing evidence-based practitioners. A formal proposal is written in APA style for the validation of specific curricula, instruction/intervention strategies/methods, or other important knowledge bases that improve practices within the field of special education or related fields. Prerequisites: CI 851, 858, and one of the following—CESP 701, 704, or CI 717.

CI 872. Evidence-Based Inquiry Portfolio Preparation (2). Candidates in the degree program present/defend a research-based inquiry project that promotes knowledge and skills of being an evidence-based practitioner. A formal paper is written in APA style and a presentation is prepared and delivered to a preidentified audience describing the results of an investigation of research and other evidence-based practices that link to the validation of specific curricula, instructional and/or intervention strategies, or other important knowledge bases linked to the field of education, special education or related field. The second part of a required capstone project for the master's degree in special education. Prerequisite: CI 871.

CI 873. Portfolio Development in Special Education (2). Students develop their research portfolio in consultation with their portfolio adviser and two other portfolio committee members. Prerequisite: CI 858.

CI 874. Portfolio Presentation in Special Education (2). Students complete, present, and orally defend their portfolio committee the research portfolio developed in CI 873. Prerequisite: CI 873.

CI 875. Master's Thesis (1–2). Students complete the research proposal accepted by their thesis committee. Students work closely with their adviser and committee. Students receive credit for this course when their thesis has been completed and defended. Prerequisite: CI 804, 858, or 860.

CI 876. Master's Thesis (1–2). Students complete and orally defend their thesis. Students work closely with their adviser and committee. Students needing an additional semester to satisfy these requirements should enroll in one hour of CI 876. Students receive credit for courses(s) when their thesis has been completed and defended. Prerequisite: CI 875 or instructor's consent.

CI 894. Advanced Topics in Early Childhood Special Education (1–4). Students participate in topical seminars in early intervention offered periodically to facilitate opportunities for the in-depth study of critical issues or topical research in the field of early childhood and/or early childhood special education. Prerequisites: CI 603 and at least one methods class: CI 614, 617, or 620. Repeatable for credit.

Educational Leadership

Graduate Faculty

Associate Professor: Jean A. Patterson (graduate coordinator for EdD program)
Assistant Professor: Barbara Jo Bennett
Senior Fellow: Craig Elliot, Patrick Terry (graduate coordinator for MEd program)

Degrees and Areas of Specialization
The department of educational leadership offers programs leading to the Master of Education (MEd) in educational leadership for students pursuing licensure at the building level, post-master's work for students pursuing licensure as district-level administrators, and the Doctor of Education (EdD) in educational leadership.

The Master of Education (MEd) in educational leadership program has two different emphases, inquiry and urban. The inquiry emphasis is designed to prepare future principals in a broad array of educational settings with all coursework taught by faculty and practicing school district leaders. The urban emphasis is designed to prepare future principals to focus on leading an urban school with students from a vast array of ethnic and socio-economic status backgrounds. All coursework is collaboratively developed and taught by faculty and USD 259 leaders. The urban emphasis has a steering committee, which consists of the CEO of USD 259, one other district representative, and two WSU graduate faculty members (graduate coordinator for the master's program and the urban faculty specialist).

Master of Education Requirements

The Master of Education (MEd) in educational leadership is a 33-credit-hour non-thesis program. Students pursuing licensure as building leaders must complete this program in its entirety. A comprehensive written examination is required. In addition to program completion, passing the state of Kansas required Praxis II Test (test code 1010) is a requirement for state licensure.

Admission Requirements

Educational Leadership

Applicants must have a minimum 3.250 grade point average for the first 30 hours of graduate coursework leading to a master's degree from an accredited institution. In addition, applicants must have validated strengths on the multiple indicators listed as follows:

1. Official transcripts of all college-level work completed, and indication of a master's degree conferral;
2. Minimum GPA of 3.250 for graduate coursework leading to the master's degree;
3. Master's degree from an accredited institution;
4. Three years of accredited experience in a school district;
5. Statement of Purpose: A 500-word statement that discusses the applicant's leadership experience (formal/informal; professional/non-professional). The applicant must be specific as to leadership experience, detailing the goals and outcomes of his or her leadership experience. The statement of purpose will be analyzed for evidence of leadership ability and writing skill; and
6. At least three letters of recommendation from people who have supervised the applicant in either an employment or community service capacity and who can comment on the applicant's intellectual ability, creativity, initiative, sensitivity to others, and leadership potential.

Students are required to complete and pass the School Superintendent Assessment (SSA) following the completion of all district-level coursework. The SSA is based on ISLLC standards.
Degree Requirements
Completion of requirements includes core courses, a minimum of 15 dissertation hours, comprehensive examinations, and an approved dissertation.

The five-member dissertation committee will include at least two university professors holding graduate faculty membership, one visiting practitioner, and an outside department graduate faculty member who will serve as the graduate dean's representative.

State Licensure Programs
The department of educational leadership provides degree programs and coursework that lead to state of Kansas certification endorsement in the following areas:

Building Leadership (requires completion of the MEd program)
District Leadership

Education Leadership (EL)
Courses for Graduate/Undergraduate Credit

EL 750. Experienced Administrator's Workshop (1–6). Offers a variety of administrative topics.

EL 752. Special Studies in Educational Administration and Supervision (1–3). Group study in a pre-selected specialized area of educational administration and supervision. Repeatable for credit with departmental consent. Prerequisite: departmental consent.

Courses for Graduate Students Only

EL 803. Introduction to Educational Leadership, Team-Based Collaboration, and Inquiry Process (3). Participants engage in self-assessment and readiness for becoming a school administrator. Includes discussing and learning issues and techniques for measurement in the cognitive, affective, and psychomotor domains. Also reviews the basics of educational research, the nature of research methodologies, and methods for the preparation of research reports. Prerequisite: admission to the MEd in educational leadership or instructor's consent.

EL 805. Practicum: School Opening I (1). Participants engage in preparing to open their school for the fall semester with their principal/mentor; participate in an inquiry project in their local school; and read and critique current research literature and analyze how that research can assist in their school. Prerequisite: admission to the MEd in educational leadership or instructor's consent.

EL 813. Introduction to Educational Leadership (3). Explores systems thinking in schools, leadership and interpersonal skills in the context of budgeting processes, crisis and safety planning, and other building-level educational issues. Examines theoretical concepts related to financial planning and teacher evaluation programs. Reviews knowledge necessary to plan and organize teams, projects, and the resources necessary to carry out day-to-day functional activities of school. Engages in simulated exercises to acquire interpersonal skills desirable for group collaboration and communication and leading change process. Conducts action research in school settings. Prerequisites: EL 803 and 805.

EL 814. Instructional Leadership in a Systems Thinking Environment (3). Focuses on curriculum, instruction, assessment, and professional development through a framework of systems and organizational theory. Students examine theoretical concepts related to curriculum philosophies and developmental processes, review recent programs and proposals as well as curriculum development at the building and school system levels. Prerequisites: EL 805, 813.

EL 815. Building-Level Leadership Practicum I (3). Spend time in schools identifying how major theories of administration apply to specific problems in the school and how the school interacts with the district and the community. Practice day-to-day activities of an educational leader in a systems thinking-building-level setting. Focus on building collaboration skills and development of interpersonal skills. Prerequisites: EL 803, 805. Corequisite: EL 813 (inquiry-based emphasis) or 814 (urban-based emphasis).

EL 823. Changing the Culture in an Environment of Collaboration and Partnership (3). Examines theoretical concepts of building relationships through effective
interpersonal skills. Includes development of interpersonal skills that lead to success in collaborating and supervising staff and development of community relations to support of schools. Explores change theory and its application in transforming the educational process and culture of a school. Engages in simulated exercises to acquire interpersonal skills desirable for group collaboration and communication and leading change process. Conducts action research in school settings. Prerequisites: EL 803, 805, 813, and 815.

EL 824. Leadership for Managing the Urban Organization (3). Focuses on critical areas of management in urban schools, including facilities, governance structures, budget, school safety, and technology leadership. Students examine the operational procedures that support an effective learning environment in the school. Prerequisites: EL 825 and 823 or 831.

EL 825. Building-Level Leadership Practicum II (3). Spend time in schools identifying how major theories of administration apply to specific problems in the school and how the school interacts with the district and the community. Practice day-to-day activities of an educational leader in a systems thinking building-level setting. Practicum experiences encompass more advanced leadership activities than practiced during EL 815. Focus on change process, conflict resolution, staff supervision, and building community partnerships. Prerequisites: EL 813 or 814, 815. Corequisites: 823 or 831.

EL 830. Practicum: School Closing (1). Engage in closing the school year with a principal/mentor. Prerequisites: admission to the MEd in educational leadership or instructor's consent, EL 825.

EL 831. Diversity and Social Justice (3). Examines the role of school leadership in an increasingly complex and diverse society. Students investigate diversity in its various forms including race, ethnicity, language, gender, socioeconomic status, disability, and religious beliefs. Students analyze inequities within societal, institutional, and personal frameworks and engage in problem solving toward socially equitable educational practices and inclusive learning communities. Prerequisite: EL 825.

EL 832. Practicum: School Opening 2 (1). For a second term, prepare to open a school for the fall semester with a principal/mentor, and participate in an inquiry project in the local school. Read and critique current research literature and analyze how that research can assist in the school. Prerequisites: admission to the MEd in educational leadership or instructor's consent, EL 825.

EL 833. Seminar: School Law and Personnel Management (3). Examines concepts related to staffing issues, including selection and recruitment, certification, orientation, staff development, evaluation, transfer and dismissal, and retirement. Covers general concepts of law, interpretations of statutes and court decisions affecting education, and the legal responsibilities of school personnel and professional negotiations. Prerequisites: admission to the MEd in educational leadership or instructor's consent, EL 813, 825.

EL 834. Leading and Managing Personnel and Target Student Populations in an Urban District (3). Focuses on school personnel management and school law related to specific student groups that populate an urban district. The legal aspects of schooling, particularly those faced by a building administrator are the major focus.
EL 981. Introduction to Field-Based Research I (5).
Provides doctoral students with an introduction to field-based inquiry/problem-solving strategies; begins the development of field-based problems/issues; and provides practice in field research design, implementation, and reporting. Prerequisite: admission to the EdD program in EL.

EL 982. Introduction to Field-Based Research II (5).
Continues EL 981 and provides opportunities for more sophisticated and complex field-based studies. Prerequisite: admission to the EdD program in EL.

EL 983. Applied Inquiry Seminar II (5).
Continues EL 981 and 982. Focuses on the development of individualized research plans leading to small group or individual field-based experiences in the second year of doctoral study. Prerequisite: admission to the EdD program in EL.

EL 984. Theoretical Frameworks for Organizational Analysis (3).
Introduces doctoral students to the theoretical frameworks and constructs that have an effect on educational organizations. Students study appreciative inquiry, action research, and social capital. Students learn to apply these frameworks and constructs to forthcoming field studies as well as consideration as a lens for viewing the dissertation. Prerequisites: EL 970, 971, 981, 982. Corequisite: EL 983.

EL 986. Advanced Field-Based Research I (5).
Provides advanced doctoral students with opportunities to increase their knowledge and experience with field-based research. Prerequisites: admission to the EdD program; EL 981, 982, 983, and concurrent enrollment in EL 972.

EL 987. Advanced Field-Based Research II (3).
Provides advanced doctoral students with opportunities to increase their knowledge and experience with field-based research. Prerequisites: admission to EdD program, EL 986.

EL 989. Research Design (3).
Introduces doctoral students to the theoretical frameworks and constructs that have an effect on educational organizations. Students study appreciative inquiry, action research, and social capital. Students learn to apply these frameworks and constructs to forthcoming field studies as well as consideration as a lens for viewing the dissertation. Prerequisites: EL 970, 971, 981, 982. Corequisite: EL 983.

EL 990. Special Problems in Administration (1–4).
Directed problems in research for specialist and doctoral degree students under supervision of a graduate instructor. Prerequisite: instructor's consent.

EL 992. Superintendency/Internship (3+3).
Two-semester course designed primarily for individuals who are completing coursework to obtain certification as a district-level administrator. Focuses on the role expectations of district-level administrators and includes field experiences designed to emphasize knowledge and skill in administrative practices and procedures. Work is designed for each student's projected administrative interest. Students must file an application for this terminal course.

EL 999. Dissertation Research (2–6).
Provides students with dissertation proposal and dissertation advisement and may be taken for 2–6 credits per semester for a maximum of 24 credits. Up to 17 credits may be counted toward program completion. Graded S/U only. Prerequisites: admission to EdD program in educational leadership, required coursework, and successful completion of comprehensive examinations.

Human Performance Studies (HPS)
Graduate Faculty
Professor: Michael Rogers (chairperson)
Associate Professor: Frank Rotkosz
Assistant Professor: Jeremy Patterson

Degrees and Areas of Specialization
The department of human performance studies offers courses of study leading to the Master of Education (MEd) in exercise science. Academic training is provided for students who wish to prepare for careers in physical education, exercise science/wellness.

Admission Requirements
Admission to the master's degree program in exercise science requires students to have completed an undergraduate degree from a regionally accredited institution and have a grade point average of at least 2.750 (4.000 system) in the last 60 credit hours of coursework including any post-bachelor's graduate work in accordance with university graduate policy.

Master of Education Requirements
The Master of Education (MEd) in exercise science program offers a 34-hour thesis option, a 36-hour non-thesis with internship option, and a 36-hour non-thesis without internship option. The thesis option requires an oral examination on the research; the non-thesis with internship and non-thesis without internship options require a written comprehensive examination.

Graduate Certificates
Students seeking a graduate certificate must be admitted to the Graduate School in a degree program or in nondegree, category A status. All Graduate School policies relative to admissions apply. Students must maintain a grade point average of 3.00 or better.

Graduate Certificate in Functional Aging
This certificate provides knowledge and training for those working in the field of aging. It will help them assist older adults to retain sufficient levels of functional ability and to understand the physiologic changes that occur with aging and how these changes impact the quality of life for older adults.

Students must receive approval to enter this certificate program from their graduate adviser and the certificate in functional aging faculty committee. To initiate the application process, candidates must provide a completed application form and a one-page statement to the certificate in functional aging faculty committee explaining the student's purpose and interest in obtaining the certificate in functional aging, as well as his or her career plans.

The program consists of 12 hours of coursework selected from the following list. Students may not take more than 6 hours from a single department.

Courses
------------------------------ Hrs.
HPS 510 Coaching & Officiating Sports . . . . .3
HPS 750 Workshop: Sport Safety Training . . .1
SMGT 770 Psychology of Sport . . . . . . . . . .3
HPS 795 Physiology of Athletic Perf. . . . . . .3
HPS 796 Motor Integration . . . . . . . . . . . . . 3
SMGT 835 Legal Issues in the Profession . . . .3

Courses for Graduate/Undergraduate Credit
HPS 510. Coaching and Officiating Sports (3).
Provides the skills and knowledge necessary for individuals to successfully coach and officiate both elementary and secondary school interscholastic and intramural athletics. Instruction for coaching and officiating techniques, coaching progression, skill analysis and skill development is provided. Management techniques for interscholastic and intramural athletics are included. A variety of coaching strategies as well as discipline and motivation techniques are discussed. Prerequisites: completion of Core I of teacher education program if under-graduate standing, graduate standing at WSU, or instructor's consent.

HPS 541. Strength Training and Conditioning (3).
Helps prepare students for the National Strength and Conditioning Association (NSCA) Certification Commission's Certified Strength and Conditioning Specialist (CSCS) examination and/or the NSCA-Certified Personal Trainer certification examination. Anatomy, biochemistry, biomechanics, endocrinology, nutrition, exercise physiology, psychology, and the other sciences that relate
to the principles of designing safe and effective training programs are covered.

HPS 890. Independent Study (1–3). Prerequisite: departmental consent.

HPS 732. Pathophysiology of Cardiovascular Disease (3). Introduces the pathophysiology of multiple cardiovascular conditions and the developing industry of cardiac rehabilitation. Introduces assessment techniques in electrocardiography (ECG) to assist in the diagnosis of cardiovascular disease. Includes an introduction to ECG leads, rate and rhythm, ECG complexes and intervals, conduction disturbances, arrhythmia, ECG identification of myocardial infarction location, and drug effects on an ECG. Prerequisite: HPS 490.

HPS 750. Workshop in Education (1–3).

HPS 762. Tests and Measurement in Human Performance (3). Introduces testing, measurement, and evaluation techniques used in human performance and related fields. Students learn to conduct valid, reliable, and objective laboratory/field testing, measurement, and evaluation procedures commonly used in human performance settings. Prerequisites: HPS 111, 301, 229, 328, and 490.

HPS 780. Physical Dimensions of Aging (3). Covers the complex physiological changes that accompany advancing age and how exercise affects the aging process. Includes an appreciation for how functional consequences affect mental and social dimensions of life. Emphasizes factors associated with the preparation, implementation, and evaluation of research projects involving elderly populations.

HPS 781. Cooperative Education Field Study (1–3). Provides the graduate student with a field placement which integrates theory with a planned and supervised professional experience designed to complement and enhance the student's academic program. Individualized programs must be formulated in consultation with appropriate graduate faculty. The plan of study for a graduate degree-bound student must be filed before approval of enrollment for cooperative education graduate credit. May be repeated for credit. A maximum of 3 hours (for non-thesis option) or 6 hours (for thesis option) may count toward the graduate degree. Offered Cr/NCr only.

HPS 790. Applied Exercise Physiology (3). Focuses on the applied aspect of exercise physiology. Includes the areas of environmental influences on performance; optimizing performance through training, nutrition, and ergogenic aids; training and performance of the adolescent athlete and the differences in performance and training between genders. Prerequisite: HPS 490 or 630.

HPS 795. Physiology of Athletic Performance (3). Explores the physiological responses involved with various athletic performances, including sports requiring endurance, speed, and power. Includes such areas of physiological study as metabolic energy systems, cardiovascular and skeletal muscle adaptation, muscle fiber type differentiation, and responses to extreme environmental conditions. Discovers parameters for performance and establishes guidelines for training at high levels of performance.

HPS 796. Motor Integration (3). Examines the principles of motor skill acquisition, human motor performance, and motor control. Emphasizes the use of transfer, memory, practice schedules, motivation, knowledge of results, neuromotor functioning, and differences in motor abilities that are involved in motor skill performance. Prerequisites: graduate standing at WSU and HPS 460 or instructor's consent.

HPS 797. Exercise in Health and Disease (3). Introduction to the physiology of disease and the effects of short- and long-term exercise on specific conditions. Understanding the guidelines for exercise testing and prescription in high risk populations. Prerequisite: HPS 490.

Courses for Graduate Students Only

HPS 800. Recent Literature in the Profession (3). Survey and critical analysis of research and other pertinent materials in the field.

HPS 815. Fitness Assessment/Exercise Recommendations (3). Introduces techniques appropriate for screening, health appraisal, and fitness assessment as required for prescribing exercise programs for individuals without disease or with controlled disease. Requires out-of-class laboratory experiences. Prerequisites: HPS 400 or equivalent and graduate standing.

HPS 830. Advanced Physiology and Anatomy of Exercise (3). In-depth study of the physiological and anatomical basis of exercise and training. Includes respiratory dynamics, cardiovascular function, energy metabolism, regulation during rest, steady state, and exhaustive physical activity; identification of joint movements; and the recognition of muscles and nerves that are involved in movement. Emphasizes immediate and long-term adaptation to exercise and training. Prerequisite: HPS 490.

HPS 837. Internship in Exercise Science/Wellness (6). Internship in selected area of specialization within the exercise science program. Students spend the equivalent of full-time employment in an appropriate agency for one full semester. Prerequisite: departmental consent.

HPS 860. Research Methods in the Profession (3). Examination of research methodology as related to topics in health, PE, recreation, sports studies, and exercise science/wellness. Includes review and critical evaluation of the literature, research design and statistical processes, methodology, data collection techniques, computer-based analysis of data and thesis/report writing, Students design and complete a mini-research project.

HPS 867. Thesis Research (1–2). Development of a research problem and proposal with the direction of a graduate faculty member. Repeatable but total credit hours counted toward degree requirements must not exceed 2. Prerequisites: admission to graduate school in good standing, HPS 860, and departmental consent.

HPS 876. Thesis (1–2). Repeatable but total credit hours counted toward degree requirements must not exceed 2. Students must be enrolled in this course during the semester in which all requirements for the thesis are met. Prerequisites: HPS 875 and consent of the student's committee chair.

HPS 890. Special Topics (1–4). Directed reading and research under supervision of a graduate instructor. Prerequisite: departmental consent.

HPS 895. Applied Research (1–4). Provides opportunity for the student to develop, in collaboration with a departmental faculty member, objectives and protocol for independent work.

Sport Management (SMGT) Graduate Faculty

Associate Professor: Clay Stoldt (chairperson)
Assistant Professor: Mark Vermillion

Degrees and Areas of Specialization

The department of sport management offers courses of study leading to the Master of Education (MEd) in sport management.

Admission Requirements

Admission to the master's degree program in sport management is considered for students who have completed an earned undergraduate degree from a regionally accredited institution with a grade point average of 2.750 (4.000 system) for the last 60 hours of coursework, in accordance with WSU graduate policy. Candidate evaluations are based on one of two options: (a) GPA for the last 60 hours of coursework and faculty evaluation based on letter of application, resume, and three reference reports; or (b) GPA for the last 60 hours of coursework, cumulative score for the verbal and quantitative sections of the Graduate Record Exam, and faculty evaluation based on letter of application, resume, and three reference reports. The program limits admissions to 30 students per year with a minimum score of 70 (out of 100 possible) based on the above admission criteria options.

Master of Education Requirements

The MEd program in sport management program requires 36 credit hours—30 hours of coursework and a 6-hour internship. In addition, the program requires that all students pass a final written examination covering all required coursework during their final semester prior to graduation.

Required Courses ........................................ Hrs
SMGT 801 Management in Sport ................. 3
SMGT 802 Ethics in Sport ......................... 3
SMGT 803 Sport Marketing ....................... 3
SMGT 811 Sport in Society ....................... 3
SMGT 822 Communication in Sport .......... 3
SMGT 828 Financial Mgmt in Sport .......... 3
SMGT 835 Legal Issues in the Profession 1 ... 3
SMGT 847 Internship ................................. 6

Elective Courses ........................................ Hrs
Students may choose from the following classes or consider other options in consultation with their assigned adviser.
SMGT 511 Selling in the Sport Industry ....... 2
SMGT 520. Tournament and Event Mgmt . . . . 3
SMGT 525. Sport Facility Management . . . . . 3
SMGT 540. Seminar in Sport Admin. . . . . . . 3
SMGT 545. Organization & Adm in Sport . . . 3
SMGT 571. Structuring & Scheduling Sports Tournaments . . . . . . 3
SMGT 770. Psychology of Sport . . . . . . . . 3
SMGT 781. Cooperative Education . . . max. 3
SMGT 836. Legal Issues in the Profession II . . . 3
SMGT 890. Special Topics . . . . . . . . . . . . . 3
HPS 800. Recent Lit. in the Profession . . . . . . 3
CI 541. Desktop Publishing . . . . . . . . . . . . . . 3
ECON 611. Economics of Sports . . . . . . . 3

Courses for Graduate/Undergraduate Credit

SMGT 511. Selling in the Sport Industry (2). Provides students with the basic tools necessary to effectively sell sport products and services. "Best practice" recommendations in academic and professional literature serve as the foundation for the class. Students have the opportunity to employ those recommendations via in-class sales exercises and sales-related assignments. Prerequisite: SMGT 112 (undergraduate students).

SMGT 520. Sport Tournament and Event Management (3). A detailed account of the structural designs, scheduling calculations, principles, procedures, and thought processes involved in organizing and conducting sport tournaments and events. Prerequisite: SMGT 511.

SMGT 525. Sport Facility Management (3). Focuses on various aspects of facility management, such as mission development, funding and budget, site selection/planning/design, floor surfaces, risk management, equipment purchase and maintenance, and personnel management. Prerequisite: SMGT 520.

SMGT 540. Seminar in Sport Administration (3). Integrates the knowledge base of sport and business as it applies in the practical setting. Prerequisites: 2.500 GPA, admission to College of Education, and senior standing.

SMGT 545. Organization and Administration of Sport (3). Discusses the fundamental aspects of management within any sport-related entity. Addresses management, marketing, facility management, human resources, legal issues, budgeting/finance, purchasing, and communication.

SMGT 590. Independent Study (1–3). Prerequisite: departmental consent.

SMGT 711. Structuring and Scheduling Sports Tournaments (3). The structural design, scheduling processes, and mathematics of sport tournaments, elimination, placement, and round robin formats.

SMGT 750. Workshop in Education (1–3).


SMGT 781. Cooperative Education Field Study (1–3). Provides the graduate student with a field placement which integrates theory with a planned and supervised professional experience designed to complement and enhance the student's academic program. Individualized programs must be formulated in consultation with appropriate graduate faculty. The plan of study for a graduate degree-bound student must be filed before approval of enrollment for cooperative education graduate credit. May be repeated for credit. A maximum of 3 hours (for non-thesis option) or 6 hours (for thesis option) may count toward the graduate degree. Offered Cr/NCr only.

Courses for Graduate Students Only

SMGT 801. Management in Sport (3). Initial introduction into the administration of sport in public schools, institutions of higher education, and commercial and professional sport organizations. Learn about the various components of sports administration by reading appropriate materials and entering into dialogue with practicing administrators.

SMGT 802. Ethics in Sport (3). Designed to give students an understanding of the various issues and concepts relating to ethical decision making in sport management settings.

SMGT 803. Sport Marketing (3). Focuses on the application of marketing principles in a sport-related setting. Addresses such content areas as corporate sponsorships, ticket sales, broadcast agreements, promotional events, and direct marketing in the sport entertainment, sport participation, and sporting goods sectors of the industry.

SMGT 811. Sport in Society (3). Addresses the impact of sports on American culture, with focus on competition, economics, mythology, education, religion, ethics, professional sports, sports and minorities.

SMGT 822. Communication in Sport (3). A sport organization’s success is largely dependent on the degree to which it can effectively communicate with key constituents. Addresses a variety of communication-related topics, including public relations management, image, media relations, and community relations.

SMGT 828. Financial Management in Sport (3). Designed to provide the prospective sport manager with an overview of the major financial issues concerning the sport industry. The concepts of resource acquisition and financial management are examined and applied to the problems faced by sport and leisure organizations today, primarily at the college and professional levels, with some attention to commercial recreational enterprises.

SMGT 835. Legal Issues in the Profession I (3). Provides students with the knowledge, understanding, and application of how the following legal issues influence the sport industry. Specific content includes: the legal system, legal research, statutory law, labor and antitrust law, tort law, constitutional law, intellectual property law, and legal research, statutory law, risk management, tort law, negligence and intentional torts, contracts, alternative dispute resolution, and employment-related issues within the sport industry. In addition to the above content knowledge and application, case studies and class discussions focus on the enhancement of problem-solving skills and prudent managerial decision making. Prerequisites: admission to the MEd sport management program or instructor’s consent.

SMGT 836. Legal Issues in the Profession II (3). Provides students with the knowledge, understanding, and application of how the following legal issues influence the sport industry. Specific content includes: (a) sport governance, (b) collective bargaining, labor and antitrust law, (c) criminal law, (d) constitutional law, (e) intellectual property rights, and (f) legal research. In addition to the above content knowledge and application, case studies and class discussions focus on the enhancement of problem-solving skills and prudent managerial decision making. Prerequisites: MEd sport management admission and the successful completion of SMGT 835.

SMGT 847. Internship (1–12). Internship in selected areas of specialization in sport management. Prerequisite: departmental consent.

SMGT 890. Special Topics (1–4). Directed reading and research under supervision of a graduate instructor. Prerequisite: departmental consent.
The College of Engineering offers graduate programs leading to a Master of Science (MS) and a Doctor of Philosophy (PhD) in aerospace engineering, electrical engineering, industrial engineering, and mechanical engineering. Areas of specialization can be found in the individual departmental sections. A Master of Science in computer science and a Master of Science in computer networking are offered through the electrical engineering and computer science department. A Master of Engineering Management (MEM) is also offered; details can be found in the industrial and manufacturing engineering department section. The graduate programs are enhanced by the presence of the industrial complex in Wichita and of the National Institute for Aviation Research on the Wichita State campus.

Certificate programs are also offered through the College of Engineering, including eight certificates offered through the industrial and manufacturing engineering department, and one interdisciplinary certificate in advanced composite materials.

**Master of Science**

**Admission Requirements**

To be admitted to the MS program, students must have completed the equivalent of an undergraduate degree in an engineering or related field. Students with deficiencies in certain areas may be required to take additional courses. Master’s engineering programs require a minimum GPA of 3.000/4.000 for admission to full standing, 2.750/4.000 for admission on probation, and 2.500/4.000 for admission to nondegree, category B. All GPAs are based on the last two years or approximately 60 credit hours of coursework. These standards may be waived at the discretion of the individual department based on an applicant’s other qualifications. Scores for the general test of the Graduate Record Examination (GRE) are recommended for all students applying from non-U.S. institutions. Also consult departmental admission sections of this Catalog for additional admission requirements.

**Degree Requirements**

The MS degree requires the completion of a plan of study approved by the student’s adviser and the department graduate coordinator, which must be filed within the first 12 credit hours of graduate coursework. At least 60 percent of the hours in the plan of study must be 700-level or above. Additional details of the MS degree may be obtained from the department graduate coordinator.

**Examination**

Before the MS degree is granted, candidates in the thesis option must pass an oral examination over the thesis. Candidates in the directed project option must give an oral presentation and submit a written report on their directed project. Candidates in the coursework option must pass a written exit exam. Details of the exit exam can be obtained from the department graduate coordinator.

**Doctor of Philosophy**

PhD programs are offered by the four departments of engineering at WSU. A grade point average of at least 3.250 in the last 60 hours or nearest two years is required for admission. Typical fields of specialization can be found in the individual departmental sections. These fields will be used in determining testing areas for the comprehensive examination in the major and minor fields.

**Admission Requirements**

Admission to any PhD program in engineering requires that the student has completed (or
nearly completed) a master's degree in engineering or physical science. In some departments, scores for the general test of the Graduate Record Examination (GRE) must be submitted. Some students may find it necessary to take prerequisite courses to be able to meet the coursework breadth requirements. The student is recommended to the graduate dean for admission by the department chairperson in consultation with the graduate coordinator of the department where the graduate student will be housed.

Also consult departmental admission sections of this Catalog for additional admission requirements.

**Plan of Study and Advisory Committee**

Within the first 12 hours of PhD coursework, the department chairperson, in consultation with the graduate coordinator and the student, recommend to the graduate dean an advisory committee for each student. The committee will be composed of a minimum of five graduate faculty, with at least four having full membership including the chairperson who also must have authorization to chair doctoral committees. A majority of the advisory committee members must be from the major department and at least one member must be outside the student's major department. The chairperson of the advisory committee should be the student's dissertation adviser. The student and advisory committee chairperson will formulate a plan of study and a tentative dissertation topic for approval by the advisory committee, the department chairperson or graduate coordinator, and the graduate dean. The plan of study will include designation of major and minor fields and all graduate-level coursework which is applicable to the degree.

**Course Breadth Requirements:** To ensure proper breadth of coursework, the plan of study must include at least 15 hours in the student's major field and 18 hours outside the major area. The 18 hours must include a minimum of 6 hours in a minor area (defined by the advisory committee) and a minimum of 6 hours of mathematics/statistics. A plan of study normally contains about 60 hours of coursework, including courses from the master's degree, and should have a minimum of 60 percent of the hours (24 dissertation hours included) beyond the master's work at the 800–900 level or equivalent.

**Comprehensive Examination**

After the PhD plan of study has been approved and after sufficient coursework has been completed, the student must take the comprehensive examination given by the advisory committee. The comprehensive examination will cover the major and minor fields and any course that the advisory committee deems necessary. The student's advisory committee is responsible for ensuring that the student takes the comprehensive examination at the appropriate time. No part of the comprehensive examination may be attempted more than twice. Upon passing the comprehensive examination, a student is known as an aspirant for the PhD.

**Time Limits and Residency Requirement**

From the time the student is admitted to the program, no more than six years may elapse until requirements for the degree have been completed. However, the student may petition the advisory committee for a leave of absence to pursue full-time professional activities related to his or her doctoral program and long-range professional goals. At least two semesters shall be spent in residency on the WSU campus involved in full-time academic pursuits. This may include up to half-time teaching and research. Well-designed plans for obtaining dissertation research experience under the supervision of the student's adviser will be considered in lieu of the residency requirement.

**Dissertation Approval Examination (DAE)**

When the PhD aspirant has completed the major portion of the coursework, the advisory committee can petition for permission to administer the DAE. The aspirant submits a written dissertation proposal to the advisory committee. After reading the proposal and receiving permission from the graduate dean, the advisory committee conducts an oral examination to determine the aspirant's ability to carry out the proposed research and whether or not this research qualifies as a PhD dissertation. Any essential change in the project requires committee approval.

After passing the DAE, the student is known as a candidate for the PhD degree. A candidate must be continuously enrolled in PhD Dissertation for a minimum of 6 hours each semester and 2 hours in the summer session until completion of the dissertation or 24 hours of PhD Dissertation have been taken. After this, 2 hours per semester and 1 hour per summer are required. In any case, no less than 24 hours of enrollment for PhD Dissertation will be required. The dissertation may be performed in absentia with the approval of the advisory committee.

**Final Dissertation Examination**

The student must defend the dissertation before the advisory committee. At least five months must elapse between the DAE and the final examination. The final examination will be open to the public. Invited guests or external examiners may be invited if the committee desires.

**Graduate Certificate in Advanced Composite Materials**

The College of Engineering offers a graduate certificate program in the area of advanced composite materials. Students seeking this certificate must be admitted to the Graduate School (1) in one of the graduate degree programs or (2) in a nondegree category A status. All Graduate School policies relative to admissions apply. International students will not be issued an I-20 for pursuing a certificate program only. They may obtain a certificate only while concurrently pursuing a graduate degree. Students pursuing a graduate certificate must notify the program coordinator (in a written memo) that they wish to complete the certificate. This notification must occur before half of the required hours are completed. Via the submitted plan of study, requests to complete the certificate are reviewed by the program faculty and the dean of the Graduate School. Students may apply certificate coursework toward a degree program. A cumulative grade point average of 3.000 must be maintained for all courses comprising the certificate program with no grades below C.

This program is aimed at equipping students with a knowledge of advanced composites including materials and processes, manufacturing, and structural analysis and design.

The courses are structured to provide extensive information about advanced composite materials technologies, analysis involving composite materials, and processing of composite materials. Program prerequisites: MATH 555, AE 333, and ME 250. This program requires satisfactory completion of the following courses (a total of 12 credit hours):

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<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>IME 576</td>
<td>Composites Manufacturing</td>
<td>3</td>
</tr>
<tr>
<td>AE 753</td>
<td>Mechanics of Laminated Composites</td>
<td>3</td>
</tr>
<tr>
<td>ME 762</td>
<td>Polymeric Composite Materials</td>
<td>3</td>
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One of the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>AE 853</td>
<td>Advanced Mechanics of Laminated Composites</td>
<td>3</td>
</tr>
<tr>
<td>IME 778</td>
<td>Machining of Composites</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 752</td>
<td>Chain Growth Polymerization</td>
<td>3</td>
</tr>
</tbody>
</table>

Graduate level directed studies of special topics course in composites related area approved by COE Composites Adv. Committee . . . 3
Aerospace Engineering (AE)

Graduate Faculty

Distinguished Professors: Klaus A. Hoffmann, Gordon Distinguished Professor (doctoral graduate coordinator), John S. Tomblin, Executive Director of NIAR and Bloomfield Distinguished Professor

Professors: Walter J. Horn, L. Scott Miller (chairperson), Michael Papadakis, Kamran Rokhsaz (master's graduate coordinator), Bert L. Smith, Roy Y. Myose, James E. Steck, Charles Yang

Associate Professors: M. Gawai Nagata

Assistant Professor: Suresh Raju

The department of aerospace engineering offers programs leading to Master of Science (MS) and Doctor of Philosophy (PhD) degrees. Faculty research provides valuable educational opportunities for graduate students. Current research topics include acoustics, aeroelasticity, aerothermodynamics, aircraft dynamic loads, aircraft flight dynamics, aircraft icing, airfoil design and rotor aerodynamics, artificial neural networks, composite materials, computational fluid dynamics, computational solid mechanics, continuum damage and fracture mechanics, damage tolerance, design, experimental aerodynamics, finite element analysis, flight dynamics and control, flight mechanics, hypersonics, intelligent control, laser velocimetry, solid mechanics, structural dynamics, and theoretical and applied aerodynamics.

The department's research and instructional facilities are among the finest in the nation. They include five wind tunnels, a water tunnel, and a structural testing laboratory. Graduate students have opportunities to use the equipment in all laboratories for their research projects. Students also may use the research facilities in the university's National Institute for Aviation Research, including a composite materials lab and a crash dynamics lab. Computer facilities for students include mainframe terminals, high performance workstations, and various personal computers.

The department's programs are enhanced by Wichita's aviation heritage and the presence of major aerospace companies in the city, including Airbus, Boeing, Spirit Aerosystems, Cessna, Bombardier-Learjet, and Hawker Beechcraft. Graduate coursework is scheduled so that engineers employed in the local industry may conveniently pursue graduate degrees.

Master of Science

Courses of study leading to the MS degree are available with specialization in any of the following four fields: (1) aerodynamics and fluid mechanics; (2) structures and solid mechanics; (3) flight dynamics and control; and (4) multidisciplinary analysis and design. Details of the MS program requirements can be found at the beginning of this chapter.

Doctor of Philosophy

Courses of study leading to the Doctor of Philosophy (PhD) degree are available with specializations in the same fields as listed for the MS degree. Details of the PhD program requirements can be found at the beginning of this chapter.

Graduate Courses

All graduate courses must be approved in advance of enrollment by a student's graduate adviser.

Courses for Graduate/Undergraduate Credit


AE 508. Systems Dynamics (3). Lumped parameter modeling; classical, numerical, transform, and state model methods of solution; introduction to systems with feedback; analogies of various physical systems. Prerequisites: AE 373 and MATH 555.


AE 525. Flight Structures I (3). Stress analysis of flight vehicle components. Prerequisite: AE 333 (no grade lower than one that generates 2,000 or more credit points per credit hour will be accepted for this course). Corequisite: MATH 555.


AE 528. Aerospace Design I (4). 2R; 2L. Methodology of flight vehicle design; mission objectives, regulations, and standards; use of hand and computer methods for configuration development and component sizing; ethics; and liability in design. Prerequisites: AE 502, 514, and 525.


AE 625. Flight Structures II (3). Strength analysis and design of flight vehicle components. Introduction to energy methods and variational principles. Application of finite element method to the analysis of flight vehicle structures. Special projects in structural analysis and design. Prerequisite: AE 333, 325.

AE 628. Aerospace Design II (4). 2R; 2L. Preliminary design of flight vehicles, design iteration, sensitivity studies, optimization, economic considerations, and introduction to project management. Prerequisite: AE 528.

AE 660. Selected Topics (1–3). New or special topics presented on sufficient demand. Repeatable for credit when subject material warrants. Prerequisite: instructor's consent.

AE 690. Independent Study (1–3). Arranged individual independent study in specialized areas of aerospace engineering under the supervision of a faculty member. Repeatable for credit. Prerequisite: consent of supervising faculty member.

AE 702. Aerospace Propulsion II (3). In-depth study of rocket and jet propulsion. Turbojet and rocket engine components. Effect of operating variables on turbojet cycles and rocket performance. Prerequisite: AE 502 or instructor's consent.

AE 703. Rotor Aerodynamics (3). Aerodynamics of rotors, including propellers, wind turbines and helicopters; momentum, blade element, and potential flow analysis methods; helicopter dynamics, control, and performance. Prerequisite: AE 424.

AE 707. Modern Flight Control System Design I (3). Modern multi-loop design methods for stability and control augmentation and guidance systems, specifically for aerospace vehicles. State variable model. Optimal state feedback gains and Riccati's equation, tracking systems, sensors and actuator, discretization of continuous dynamic systems, optimal design for digital controls, and effect of non-linearities and trim conditions on design considerations. Prerequisites: AE 514 or 714, and AE 607 or EE 684 or ME 659.

AE 711. Intermediate Aerodynamics (3). Studies potential flow equations of motion, singularity solutions, principle of superposition, conformal mapping, thin airfoil theory, finite wing theory, effects of fluid inertia, three-dimensional singularities, swept wing theory, delta wing theory, introduction to panel methods, and an introduction to automobile aerodynamics. Prerequisite: AE 424 or ME 521.

AE 712. Advanced Aerodynamics Laboratory (3). 1R; 3L. Advanced topics in wind tunnel testing, including analysis and sensitivity, modeling techniques, flexure design and calibration, control surface loads and moments, laser velocimetry, hot film anemometry, dynamic signal processing, flow measurement probes,
flow visualization using smoke tunnels and water tunnel. Prerequisite: AE 512 or instructor’s consent.


AE 715. Intermediate Space Dynamics (3). Advanced topics in orbital mechanics—vector mechanics perspective of the two-body problem; fast transfers; interplanetary missions including gravity assist maneuver and intercept problem; atmospheric entry. Prerequisite: AE 415 or instructor’s consent.

AE 716. Compressible Fluid Flow (3). Analysis of compressible fluid flow for one- and two-dimensional cases, moving shock waves, one-dimensional flow with friction and heat addition, linearized potential equation, method of characteristics, conical shocks, and subsonic similarity laws. Prerequisites: AE 424, ME 521 or equivalent.

AE 719. Introduction to Computational Fluid Dynamics (3). Classification of partial differential equations, numerical solution of parabolic, elliptic, and hyperbolic differential equations, stability analysis, boundary conditions, scalar representation of the Navier-Stokes equations, incompressible Navier-Stokes equations. Prerequisite: AE 424 or ME 521.

AE 722. Finite Element Analysis of Structures I (3). Advanced treatment of the theoretical concepts and principles necessary for the application of the finite element method in the solution of differential equations in engineering. Prerequisite: AE 333, 625 or equivalent or instructor’s consent.

AE 731. Theory of Elasticity (3). Develops the equations of the theory of elasticity and uses them to determine stress and displacement fields in linear elastic isotropic bodies; uses Airy stress functions to obtain solutions; and introduces energy principles and variational methods. Prerequisite: instructor’s consent.


AE 753. Mechanics of Laminated Composites (3). A descriptive classification of advanced composite materials and their constituents; mechanics of laminas and laminates; testing for material properties; laminate and laminate failure criteria; laminate strain allowances; structural analysis (beams and axially loaded members); design guidelines; introduction to manufacturing methods, repair, and non-destructive testing. Prerequisites: AE 333 and senior standing.

AE 759. Neural Networks for System Modeling and Control (3). Introduces specific neural network architectures used for dynamic system modeling and intelligent control. Includes theory of feed-forward, recurrent, and Hopfield networks; applications in robotics, aircraft and vehicle guidance, chemical processes, and optimal control. Prerequisite: AE 607 or ME 659 or EE 684 or instructor’s consent.

AE 760. Selected Topics (1–3). Prerequisite: instructor’s consent.


AE 777. Vibration Analysis (3). A study of free, forced, damped, and undamped vibrations for one and two degrees of freedom, as well as classical, numerical, and energy solutions of multi-degree freedom systems. Introduces continuous systems. Prerequisites: MATH 555, AE 333 and 373.

Courses for Graduate Students Only


AE 807. Modern Flight Control Systems Design II (3). Continuation of AE 707. Emphasizes the effects of atmospheric turbulence and corrupted measurements; state estimation using the Kalman filter; output feedback design methods for flight controls; robustness requirements in the design; and extension to digital systems. Prerequisites: AE 707 and 714.

AE 811. Panel Methods in Aerodynamics (3). An introduction to panel method theory and application for inviscid incompressible attached flows. Uses some two- and three-dimensional computer codes. Prerequisites: AE 711 and MATH 575 or equivalent.

AE 812. Aerodynamics of Viscous Fluids (3). Viscous fluids flow theory and boundary layers. Prerequisite: AE 424 or ME 521.

AE 813. Introduction to Aeroelasticity (3). Studies phenomena involving interactions among aerodynamic, inertial, and elastic forces. Explores influence of these interactions on aircraft design. Includes such specific cases as divergence, control effectiveness, control reversal, flutter, buffering, dynamic response to rapidly applied periodic forces, aerelastic effects on load distribution, and static and dynamic stability. Prerequisite: AE 777 or MATH 755, or instructor’s consent and programming proficiency.


AE 817. Transonic Aerodynamics (3). Experimental and analytical difficulties in low and flight near Mach one; basic equations and solution methods; laminarized potential equation; shock occurrence criteria on wings; Transonic Area Rule; nozzle throat design; detached shock wave computations; computational methods. Prerequisites: AE 424 or equivalent; and AE 711 or 716.

AE 818. Hypersonic Aerodynamics (3). Classical hypersonic theory and approximations; Newtonian flow; flight corridors and trajectories; hot gas effects; experimental difficulties; short time test facilities; computational techniques; propulsion methods; airframe-engine integration; SCRAM jets. Prerequisites: AE 711 and 716 or equivalent.

AE 822. Finite Element Analysis of Structures II (3). Formulation of the finite element equations by variation methods; use of isoparametric and higher order elements for analyzing two- and three-dimensional problems in solid mechanics; introduction to solutions of nonlinear problems. Prerequisites: AE 722 and 731.

AE 831. Continuum Mechanics (3). Introductory treatment of the fundamental, unifying concepts of the mechanics of continua with applications to classical solid and fluid mechanics. Prerequisite: instructor’s consent.

AE 832. Theory of Plates and Shells (3). Small deflections of thin elastic plates; classical solutions for rectangular and circular plates; approximate solutions for plates of various shapes; introduction to the analysis of thin shells. Prerequisite: AE 731.


AE 860. Selected Topics (1–3). Prerequisite: instructor’s consent.


AE 878. MS Directed Project (1–3). A project conducted under the supervision of an academic adviser for the directed project option. Requires a written report and an oral presentation on the project. Graded S/U only. Prerequisite: consent of academic adviser.

AE 890. Independent Study (1–3). Arranged individual independent study in specialized areas of aerospace engineering under the supervision of a faculty member. Repeatable for credit. Prerequisite: consent of supervising faculty member.

AE 911. Airfoil Design (3). Historical development of airfoils, underlying theories and experiments; modern airfoil design philosophies and techniques; theories used in modern airfoil computation methods; application of computer programs for practical airfoil design problems.
including high lift and control devices. Prerequisites: AE 711, MATH 757.

AE 913. Aerodynamics of Aeroelasticity (3). A study of thin airfoils and finite wings in steady flow and thin airfoils oscillating in incompressible flow. Includes extension to compressible and three-dimensional airfoils and modern methods for low aspect ratio lining surfaces. Prerequisites: AE 711 and 777 or instructor’s consent.


AE 936. Theory of Plasticity (3). Includes criteria of yielding, plastic stress-strain relationships, and stress and deformation in thick-walled shells, rotating discs and cylinders, bending and torsion of prismatic bars for ideally plastic and strain-hardening materials. Includes two-dimension and axially symmetric problems of finite deformation and variational and extremum principles. Prerequisite: AE 731.

AE 960. Advanced Selected Topics (1–3). Prerequisite: instructor’s consent.


AE 990. Advanced Independent Studies (1–3). Prerequisite: instructor’s consent.

Electrical Engineering and Computer Science (EECS)
Graduate Faculty

Professors: S.C. Chou (emeritus), Ward T. Jewell, Hyuck M. Kwon, Ravindra Pendse (associate provost and chief information officer, academic affairs and research), Prakash Ramanan, M. Ed Sawan (emeritus), Steven R. Skinner (graduate coordinator, MSE and MSCS), Paul York (emeritus)

Associate Professors: Rajiv Bagai (graduate coordinator MSCN), Asrat Teshome, John M. Watkins (chairperson)

Assistant Professors: Yanwu Ding, Neeraj Jaggi, Preethika Kumar, Vinod Namboodiri, Bin Tang

Lecturers: Keenan Jackson, Julie Taylor

The department of electrical engineering and computer science (EECS) offers courses of study leading to three Master of Science (MS) degrees: computer networking, computer science, and electrical engineering. The MS degrees require the completion of a plan of study approved by the student’s adviser and the appropriate department graduate coordinator, which must be filed within the first 12 hours of graduate coursework. Three options are available:

- The thesis option requires a minimum of 24 hours of coursework, plus a minimum of 6 hours of thesis;
- The directed project option requires a minimum of 30 hours of coursework, plus a minimum of 3 hours of directed project; and
- The courses-only option requires a minimum of 36 hours of coursework.

Master of Science Degrees

Master of Science in Computer Networking

This is a comprehensive degree program that prepares graduate students for careers in computer networking and information security. The curriculum structure provides students with an integrated experience in system engineering, economics, architecture, computer security, and policies of computer communication networks.

Each plan of study must contain the following:

- Two core courses:
  - CS 736 Data Communication Networks
  - CS 764 Routing and Switching I
- Electives selected from at least three (two for students in thesis option) of the following areas:
  - Advanced Networking
  - Mathematics and Statistics
  - Wireless Networking
  - Programming
  - Reliability
  - Management Systems
- 60 percent of the hours must be at the 700 level or higher, and
- At least two 800 or 900 level courses, including thesis and project

It is important to note that these are only minimum requirements. Students should consult their advisers to determine any additional requirements they may have. Additional details of the MS in computer science degree, including specific courses in each of the elective areas, may be obtained from the MS in computer science graduate coordinator.

Master of Science in Electrical Engineering

Courses of study leading to the MS degree in electrical engineering are available with specializations in any of the following six fields: (1) control systems, (2) communications, (3) signal processing, (4) computers and digital systems, (5) energy and power systems, and (6) computer networking.

Each plan of study must contain the following:

- Two core courses, which must be selected from the following:
  - EE 697 Electric Power System Analysis II
  - EE 726 Digital Communication Systems I
  - CS 736 Data Communication Networks
  - EE 754 Probabilistic Methods in Systems
  - EE 782 Digital Signal Processing
  - EE 792 Linear Systems
- A minimum of 18 EECS hours, including thesis, project, and independent study,
- 60 percent of the hours must be at the 700 level or higher; and
- At least two 800- or 900-level EECS courses, including thesis and project.

It is important to note that these are only minimum requirements. Students should consult their advisers to determine any additional requirements they may have. Additional details of the MS in electrical engineering degree, including specific courses in each of the elective areas, may be obtained from the MS in electrical engineering graduate coordinator.

Doctor of Philosophy

Courses of study leading to the Doctor of Philosophy (PhD) degree in electrical engineering are available with specializations in control theory, communication/signal processing, computers and digital systems, energy and power...
systems, and computer networking. Details of the PhD program can be found at the beginning of this chapter.

In addition to the general admission requirements for all doctoral engineering students, admission to the PhD program in the electrical engineering and computer science department requires the completion of a master’s degree in engineering or physical sciences, a graduate grade point average of at least 3.250 on a 4.000 scale, and a combined verbal and quantitative GRE score of 1100.

**Facilities**

Modern electrical engineering laboratories contain facilities for experimental work in areas of control systems, computers and digital systems, communications, energy conversion, power electronics, power quality, and computer networking.

**Computer Science (CS)**

**Courses for Graduate/Undergraduate Credit**

**CS 510. Programming Language Concepts (3).** Theoretical concepts in the design and use of programming languages, including scope of declarations, storage allocation, subroutines, modules, formal methods for the description of syntax, and semantics. Introduction to the concepts of different styles of languages—imperative languages, functional languages, logic languages, object-oriented languages, etc. Prerequisites: CS 300, 322.

**CS 540. Operating Systems (3).** The fundamental principles of operating systems: process synchronization, scheduling, resource allocation, deadlocks, memory management, file systems. Studies a specific operating system in depth. Programming assignments consist of modifications and enhancements to the operating system studied. Prerequisites: CS 238, 300.

**CS 560. Data Structures and Algorithms II (3).** Design and analysis of algorithms and proof of correctness. Analysis of space and time complexities of various algorithms including several sorting algorithms. Data structures include heaps, hashing, and binary search trees. Prerequisites: CS 300, 322; STAT 460 or IME 254.

**CS 594. Microprocessor Based System Design (4).** Prerequisite: CS 322. Presents development of microprocessor based systems. Studies interfacing the address bus, data bus, and control bus to the processor chip. Memory systems and I/O devices interfaced to the appropriate busses. Vendor-supplied, special-purpose chips, such as interrupt controllers, programmable I/O devices, and DMA controllers, integrated into systems designed in class. Lab gives hands-on experience. Prerequisites: CS 238, 394.

**CS 615. Compiler Construction (3).** First compiler course for students with a good background in programming languages and sufficient programming experience. Covers over-all design and organization of compilers and interpreters, lexical and syntax analysis, construction of symbol tables, scope analysis, type checking, error recovery, run-time organization, intermediate code and its interpretation, code generation, and optimization. Project-oriented course. Emphasizes practical experience gained through the design and implementation of a simplified but non-trivial compiler for a strongly typed, procedural language. The implementation is carried out in a modern systems programming environment. Prerequisite: CS 510.

**CS 644. Advanced Unix Programming (3).** Improves skills in C programming under the Unix environment. Covers file I/O, both buffered and unbuffered, working with the Unix file system, concurrent programming with multiple processes, and process control. Also includes the use of signals and concepts of interprocess communication with pipes and FIFOs. Students must have prior knowledge of C language and its use of structures and pointers. Prerequisite: CS 300.

**CS 655. Information Delivery on the Internet (3).** Explores the capabilities of providing information on the World Wide Web. Information is typically provided through some sort of Web site that incorporates static text and the dynamic capabilities of the Web. Learn how to create an interactive Web site through the use of CGI and Java programming and how to interconnect a Web site to databases and generate images on the fly. Java portion covers a wide range of Java language and the Applet interface and utilities. Prerequisite: CS 300.

**CS 665. Introduction to Database Systems (3).** Fundamental aspects of database systems, including conceptual database design, entity-relationship modeling, and object-oriented modeling: the relational data model and its foundations, relational languages, and SQL. (Structured Query Language); logical database design, dependency theory, and normal forms; physical database design, file structures, indices, and decomposition; integrity, security, concurrency control, recovery techniques, and optimization of relational queries. Prerequisites: CS 300 and MATH 322.

**CS 680. Introduction to Software Engineering (3).** 2R; 2L. An introduction to the body of knowledge, presently available tools, and current theories and conjectures regarding the process of program development. Studies these topics from several different viewpoints, ranging from the individual program statement to a large programming project. Prerequisites: CS 300 and 410, each with a C or better.

**CS 697. Selected Topics (1–3).** I–3R; IL. Selected topics of current interest. Repeatable for credit with departmental consent. Prerequisite: departmental consent.

**CS 720. Theoretical Foundations of Computer Science (3).** Provides an advanced level introduction to the theoretical bases of computer science. Computer science theory includes the various models of finite state machines, both deterministic and non-deterministic, and concepts of decidability, computability, and formal language theory. Prerequisite: CS 322.

**CS 736. Data Communication Networks (3).** Presents a quantitative performance evaluation of telecommunication networks and systems. Includes fundamental digital communications system review; packet communications; queuing theory; OSI, s.25, and SNA layered architectures; stop-and-wait protocol, go-back-N protocol, and high-level data link layer; network layer flow and congestion control; routing; polling and random access; local area networks (LAN); integrated services digital networks (ISDN); and broadband networks. Prerequisite: CS 300.

**CS 737. Wireless Networking (3).** Covers topics ranging from physical layer to application layer in the wireless and mobile networking fields. Explores physical layer issues of wireless communications, wireless cellular telephony, ad-hoc networks, mobile IP and multicast, wireless LAN (IEEE 802.11), security, Bluetooth and WAP, etc. Imparts general knowledge about wireless communication technologies and ongoing research activities. Prerequisite: CS 736.

**CS 738. Embedded Systems Programming (3).** Studies the requirements and design of embedded software systems. Application of the C programming language in the implementation of embedded systems emphasizing real-time operating systems, interfacing to assembly and high-level languages, control of external devices, task control, and interrupt processing. Prerequisite: CS 594.

**CS 750. Workshop in Computer Science (1–5).** Short-term courses with special focus on introducing computer science concepts. Repeatable for credit. Prerequisite: departmental consent.

**CS 764. Routing and Switching I (4).** 3R; 3L. An introductory course which studies different hardware technologies, like Ethernet and token ring. Discusses VLANs. Introduces different routing protocols. Includes hands-on experience in the CS department’s routing and switching lab. Prerequisite: CS 464 or 736.

**CS 765. Routing and Switching II (4).** 3R; 3L. Discusses different bridging techniques, including SRB, RSB, and DL-SW. Also includes advanced routing protocols, like OSPF and EIGRP, and route redistribution. Includes hands-on experience in the EECS department’s routing and switching lab. Prerequisite: CS 764.

**CS 766. Information Assurance and Security (3).** Provides basic concepts in information assurance and security including encryption, digital certificates, security in networks, operating systems, and databases. Topics in intrusion detection, legal and ethical issues in security administration will also be discussed. Prerequisite: CS 464, or 736 or 764.

**CS 771. Artificial Intelligence (3).** Heuristic versus algorithmic methods; principles of heuristic approach, and cognitive processes. Also covers objective and methods of artificial intelligence research and simulation of cognitive behavior. Includes a survey of appropriate examples from various areas of artificial intelligence research. Prerequisites: CS 300, MATH 322.

**CS 781. Cooperative Education in Computer Science (1–5).** Practical experience in a professional environment to complement and enhance the student’s academic program. For master’s level CS students. Repeatable, but may not be used to satisfy degree requirements. Offered Cr/NCr only. Prerequisites: departmental consent and graduate GPA of 3.000 or above.

**CS 798. Individual Projects (1–3).** Allows beginning graduate students and mature undergraduate students to pursue individual projects of current interest in computer science. Graded S/U only. Prerequisite: departmental consent.

**Courses for Graduate Students Only**


CS 836. Computer Performance Analysis (3). Teaches the basic concepts in stochastic modeling of systems for analysis and for simulation. Analytic modeling techniques include discrete- and continuous-time Markov chains, queuing theory, and queuing networks, as well as approximate methods based on these techniques. Operational analysis presents a non-stochastic, measurement-based perspective to the analysis of computer systems. Also emphasizes discrete-event simulation, a widely-used technique in many areas of performance evaluation. Performance metrics taken from stochastic simulations are phantom variables, and are subject to the same types of statistical analysis as data obtained from real systems. Prerequisite: EE 754.

CS 837. Energy Intelligent Mobile Computing (3). Introduces various mobile computing scenarios involving technologies like wireless LANs, wireless sensor networks, radio frequency identification and more. Explores fundamental causes of energy usage during communication by wireless radio enabled devices and addresses means to be more efficient. Also looks at how computing can, in general, be carried out in an energy intelligent manner. Taught with the aim of imparting research skills in the area. Prerequisites: CS 737 or equivalent and knowledge of the Unix operating system.

CS 843. Distributed Computing Systems (3). A study of hardware and software features of online multiple computer systems emphasizing network design and telecommunication. Includes distributed databases, interprocessor communication and centralization versus distribution. Studies the use of microcomputers in representative configurations. Prerequisites: CS 540, 736.

CS 862. Advanced Database Systems (3). Covers recent developments and advances in database technology. Designed for students who have had a first database course and have a good background in the related computer science disciplines. Possible topics include extended relational database management systems, object-oriented database management systems, deductive databases, database type systems and database programming language, persistent languages and systems, distributed databases. Prerequisite: CS 665.

CS 863. Multimedia Database Systems (3). Covers state-of-the-art techniques for representing and manipulating information in multimedia databases. Emphasizes image, audio, video, and document data. Covers theoretical principles underlying storage, retrieval, querying, and delivery of such data. Requires good prior knowledge of relational and/or object-oriented databases. Prerequisite: CS 665 with a grade of C or better.

CS 864. Database Query and Processing Optimization (3). Covers concepts and techniques for efficient and accurate processing of queries for a variety of data forms, such as centralized and distributed relational databases as well as object-oriented, fuzzy, and multimedia databases. Prerequisites: CS 660, 665.

CS 865. Principles of DBMS Implementation (3). Deals with two of the three main components of a relational Database Management System (DBMS): storage management and query processing. The third component, transaction management, is covered as time permits. Prerequisite: CS 660, 665.

CS 866. XML Databases (3). Deals with modeling semi-structured Web databases as XML databases, their schema (DTD and XML schema), integrity constraints, and their query languages (XPath, XSLT, and XQuery). Prerequisite: CS 665.

CS 868. Database Transaction Management (3). Topics covered include logging and recovery from system failures, concurrency control, serial and serializable schedules, schedulers, and deadlock detection and recovery. Prerequisite: CS 665.

CS 891. Project (3). An intensive project involving the analysis and solution of a significant practical problem which must be supervised by a CS graduate faculty advisor; it can be job-related. Students must write a report be on the project and pass an oral final examination by an ad hoc faculty committee headed by the project advisor. Graded S/U only. Prerequisite: departmental consent.

CS 892. Thesis (1–6). May be repeated for up to 6 hours of credit. Graded S/U only. Prerequisite: departmental consent.

CS 893. Individual Reading (1–5). Graded S/U only. Prerequisite: departmental consent.

CS 898. Special Topics (2–3). 2–3R; 2L. Topics of current interest to advanced students of computer science. Repeatable for credit with departmental consent. Prerequisite: departmental consent.

Electrical Engineering (EE)

Courses for Graduate/Undergraduate Credit

EE 577. Special Topics in Electrical and Computer Engineering (1–4). New or special courses presented on sufficient demand. Repeatable for credit. Prerequisite: departmental consent.

EE 585. Electrical Design Project I (2). 3L. A design project under faculty supervision chosen according to the student's interest. Does not count toward a graduate electrical engineering degree. Prerequisite: departmental consent.

EE 586. Introduction to Communication Systems (4). 3R; 3L. Fundamentals of communication systems; models and analysis of source, modulation, channel, and demodulation in both analog and digital form. Reviews Fourier Series, Fourier Transform, DFT, Probability, and Random Variables. Studies in Sampling, Multiplexing, AM and FM analog systems, and additive white Gaussian noise channel. Additional topics such as PSK and FSK digital communication systems covered as time permits. Prerequisites: EE 383 and IME 254.

EE 588. Advanced Electric Motors (3). Advanced electric motor applications and theory. Includes single-phase motors, adjustable speed AC drive applications, and stepper motors. Prerequisite: EE 488.

EE 595. Electrical Design Project II (2). 3L. A continuation of EE 585. Prerequisite: EE 585. Will not count toward a graduate electrical engineering degree.

EE 598. Electric Power Systems Analysis (3). Analysis of electric utility power systems. Topics include analysis and modeling of power transmission lines and transformers, power flow analysis and software, and an introduction to symmetrical components. Prerequisite: EE 282.

EE 610. Introduction to Quantum Computing (3). Introduction to the theory and practice of quantum computing. Topics covered include the basics of quantum mechanics, Dirac notation, quantum gates and circuits, entanglement, measurement, teleportation, and algorithms. Prerequisite: MATH 511.


EE 688. Power Electronics (4). 3R; 2L. Deals with the applications of solid-state electronics for the control and conversion of electric power. Gives an overview of the role of the thyristor in power electronics application and establishes the theory, characteristics and protection of the thyristor. Presents controlled rectification, static frequency conversion by means of the DC link-converter and the cyclo converter, emphasizing frequency; and voltage control and harmonic reduction techniques. Also presents requirements of forced commutation methods as applied to AC-DC control and firing circuit requirement and methods. Introduces applications of power electronics to control AC and DC motors using new methods such as microprocessor. Prerequisite: EE 492.

EE 691. Integrated Electronics (3). A study of BJT and MOS analog and digital integrated circuits. Includes BJT, BIMOS, and MOS fabrication; application specific semi-custom VLSI arrays; device performance and characteristics; and integrated circuit design and applications. Prerequisites: CS 194 and 493.

EE 697. Electric Power Systems Analysis II (3). Analysis, design, modeling, and simulation of high-voltage electric power transmission systems and rotating generators. Simulations include short circuit studies, economic dispatch, and transient stability. Prerequisite: EE 598.

EE 726. Digital Communication Systems I (3). Presents the theoretical and practical aspects of digital and data communication systems. Includes the modeling and analysis of information sources as discrete processes; basic source and channel coding; multiplexing and framing; spectral and time domain considerations related to ASK, PSK, DFM, QPSK, FSK, MSK, and other techniques appropriate for communicating digital information in both base-band and band-pass systems; intersymbol interference; effects of noise on system performance; optimum systems; and general study of digital systems in signal-space. Prerequisites: EE 586 and 754.

EE 754. Probabilistic Methods in Systems (3). A course in random processes designed to prepare the student for work in communications controls, computer systems information theory, and signal processing. Covers
basic concepts and useful analytical tools for engineering problems involving discrete and continuous-time random processes. Discusses application to system analysis and identification, analog and digital signal processing, data compression parameter estimation, and related disciplines. Prerequisites: EE 383 and ME 254.

EE 777. Selected Topics in Electrical Engineering (1–4). New or special courses presented on sufficient demand. Repeatable for credit. Prerequisite: departmental consent.


EE 784. Digital Control Systems (3). Studies the effects of sampling and quantization, discrete systems analysis, sampled-data systems, and z-domain and state space design. Prerequisites: EE 684 or ME 659.

EE 790. Independent Study in Electrical Engineering (1–3). Arranged individual, independent study in specialized content areas in electrical engineering under the supervision of a faculty member. Repeatable for credit. Prerequisite: departmental consent.

EE 791. Design of Analog Integrated Circuits (3). Concerned primarily with the design of analog integrated circuits, and detailed analysis. The design concentrates on MOS devices, but some attention is also given to bipolar technology. Dynamic loads dominate, as the need is to limit passive components such as resistors and capacitors as much as possible. Specific circuits include current sources, voltage references, differential amplifiers, with operational amplifiers providing the emphasis. SPICE simulation is used extensively, including parameter sweeps, temperature effects, and sensitivity analysis as well as frequency response and time-domain analysis. Prerequisite: EE 691.


EE 796. Electric Power Distribution (3). Analysis, design, modeling, and simulation of radial medium-voltage electric power distribution systems. Simulations include power flow and short circuit. Prerequisite: EE 598.

Courses for Graduate Students Only

EE 826. Digital Communication Systems II (3). Studies modern digital communication systems. Discusses topics such as carrier and symbol synchronization techniques; fading multipath channels; frequency-hopped spread spectrum systems; smart antenna array systems; space time codes (STC); space-time block codes (STBC); multi-input multi-output (MIMO); orthogonal frequency division multiplexing (OFDM) systems; and multi carrier code division multiple access (MC-CDMA) communication. Prerequisite: EE 726.

EE 856. Information Theory (3). Introduction to information theory for students of communication theory, computer science, and statistics. Introduces the definitions of entropy, relative entropy, and mutual information. Discusses asymptotic equipartition property, entropy rates of a stochastic process, channel capacity, differential entropy, and gaussian channel. Prerequisite: EE 754.

EE 864. Multi-Service Over IP (4). 3R; IL. Advanced networking course; deals with challenges and solutions associated with sending voice, video, and data (multi-service) over IP. Includes telephony signaling, call routing and dial plans, measuring voice quality, voice digitization and coding, quality of service issues, and current research. Hands-on lab allows students to design, troubleshoot, and test different VoIP scenarios. Prerequisite: CS 764.

EE 876. MS Thesis (1–6). Repeatable for credit toward the MS thesis option up to 6 hours. Graded S/U only. Prerequisite: prior consent of MS thesis adviser.

EE 877. Special Topics in Electrical Engineering (3). New or special courses are presented under this listing on sufficient demand. Repeatable for credit. Prerequisite: departmental consent.

EE 878. MS Directed Project (1–3). A project conducted under the supervision of an academic adviser for the directed project option. Requires a written report and an oral presentation on the project. Graded S/U only. Prerequisite: consent of academic adviser.

EE 885. Robust Control Systems (3). When applying control theory to real systems, engineers are faced with uncertainties in plant models, plant disturbances, and sensor noise. Robust control theory is an optimal approach for applying feedback control theory to systems with these uncertainties. Students completing this course should be capable of analyzing a linear control system in terms of performance and robustness, designing controllers and estimators using H-infinity optimization, and reducing plant model and/or controller implementation orders. Prerequisites: EE 792; EE 684 or ME 659.

EE 886. Error Control Coding (3). Introduces error control codes, including Galois fields, linear block codes, cyclic codes, Hamamard codes, Golay codes, BCH codes, Reed-Solomon codes, convolutional codes, Viterbi decoding algorithm, Turbo codes, and ARQ protocols. Applies to digital 3G and 4G cellular and satellite communication systems. Prerequisite: EE 726.

EE 893. Optimal Control (3). Reviews mathematics relevant to optimization, including calculus of variations, dynamic programming, and other norm-based techniques. Formulates various performance measures to define optimality and robustness of control systems. Studies design methods for various classes of systems, including continuous-time, discrete-time, linear, nonlinear, deterministic, and stochastic systems. Prerequisite: EE 792.

EE 897. Operation and Control of Power Systems (3). Acquaints electric power engineering students with power generation systems, their operation in economic mode, and their control. Introduces mathematical optimization methods and applies them to practical operating problems. Introduces methods used in modern control systems for power generation systems. Prerequisite: EE 598.

EE 898. Electric Power Quality (3). Measurement, analysis, modeling, simulation, and mitigation of electric power quality on the medium- and low-voltage distribution systems. Prerequisite: EE 697.


EE 981. Co-op (1). A work-related placement with a supervised professional experience to complement and enhance the academic program. Intended for master’s- or doctoral students in electrical engineering. Repeatable for up to 8 hours. May not be used to satisfy degree requirements. Graded S/U only. Prerequisites: departmental consent and a graduate GPA of at least 3.000.

EE 986. Wireless Spread-Spectrum Communication (3). Explains what spread-spectrum communication is and why direct-sequence code-division multiple access (DS-CDMA) spread-spectrum is used for wireless communication. Studies the block diagrams of the IS-95 forward and reverse wireless communication links under multi-path mobile fading environment using analysis techniques and simulation. Analyzes pseudo-noise (PN) signal generation, the hand-limited waveform shaping filter, convolutional coding, interleaver, Walsh code orthogonal modulation, Rake finger receivers, non-coherent Walsh orthogonal sub-optimal demodulation, other simultaneously supported subscribers, and third generation CDMA. Prerequisite: EE 726.

EE 990. Advanced Independent Study (1–3). Arranged individual, independent study in specialized content areas in engineering under the supervision of a faculty adviser. Repeatable toward the PhD degree. Prerequisites: advanced standing and departmental consent.

Industrial and Manufacturing Engineering (IME)
Graduate Faculty

Professors: Krishna K. Krishnan (chairperson and graduate coordinator), Viswanathan Madhavan, Don Malzahn, (undergraduate coordinator), Janet M. Twomey
The industrial and manufacturing engineering (IME) department at WSU is committed to instruction and research in design, analysis, and operation of manufacturing and other integrated systems of people, material, equipment, and capital. The graduate programs are directed toward both full-time and part-time students with a special emphasis on providing training and experience in performing independent research on topics with theoretical as well as applied interest. Students are encouraged to conduct research or take courses on topics that overlap several disciplines.

The IME department offers Master of Engineering Management (MEM), Master of Science, and Doctor of Philosophy degree programs in industrial engineering (MSIE and PhDIE, respectively). Fields of specialization for the MSIE and PhDIE programs include engineering systems, ergonomics/human factors, and manufacturing systems engineering. The department also offers seven graduate certificate programs in the following areas: advanced manufacturing analysis, composite materials and manufacturing engineering, tool design, advanced manufacturing and testing methods used in the aerospace industry.

Facilities

The following facilities used in teaching and research are available for graduate students:

**Cessna Manufacturing Lab:** Activities include research and teaching. The laboratory supports all courses offered in the areas of manufacturing engineering, tool design, advanced and nontraditional machining, composite machining, and computer-aided manufacturing. The lab is also used by other departments, mainly the ME department, for its educational and research needs. The Mini Baja team makes extensive use of this lab which also supports multi-disciplinary courses and senior design projects.

**Composites Manufacturing Lab:** This newly established laboratory supports a number of courses on composites materials and manufacturing processes. It is designed to provide students with hands-on experience in composites manufacturing and testing methods used in the aerospace industry.

**Reliability and Maintenance Engineering Lab:** This new laboratory supports courses in the reliability and maintainability areas. Its main goal is to provide students with hands-on experiences in modeling accelerated life testing and degradation testing, optimal design of testing plans, robust reliability design, system reliability optimization, condition-based maintenance (CBM), and engineering risk assessment. To carry out these teaching-related activities, the lab hosts accelerated life/degradation testing equipment and several test beds for CBM.

**Ergonomics and Occupational Biomechanics Laboratory:** This lab supports teaching and research in fields related to industrial ergonomics.

**CAD/Systems Lab:** A teaching lab that supports a number of courses including engineering graphics, systems simulation, and neural networks. The lab is also used on a regular basis by the ME and other departments to support a number of courses.

**IME Senior Project Studio:** This new lab is designed for the IME senior project using funds set aside from the IME general budget. The lab houses five stations with computers and a printer and a place for student groups to hold their design meetings.

**Rapid Prototyping and Product Development Labs:** Activities include research and teaching, and support courses in all IME areas as well as the senior design course.

**Manufacturing Process Lab:** This lab is used to carry out research in machining, sheet metal forming, and in support of manufacturing engineering courses.

**Virtual Reality Development Lab:** This lab has been established with funds provided by the project Innovation in Aircraft Manufacturing Through System-Wide Virtual Reality Models and Curriculum Integration, an NSF Partnerships for Innovation program. Additional funding is provided by NSF-EPSCoR through the Virtual Reality of Manufacturing Processes project. The virtual models developed by this lab support modules in several different courses in the IME department.

**Metrology Lab:** This lab supports the manufacturing metrology course and the newly designed course in aircraft manufacturing in the IME department. It contains a number of basic and advanced measurement devices such as optical comparator, surface roughness measurement, and vision system.

**Curriculum and Research Tracks**

The industrial and manufacturing engineering teaching and research tracks are clustered around the following three areas:

**Engineering Systems.** Emphases include optimization; multi-criteria decision making; modeling and analysis of manufacturing/service systems; management of engineering enterprises; decision analysis; total quality management; application of intelligent systems and simulation in manufacturing and activity-based costing.

**Ergonomics/Human Factors.** Emphases include industrial ergonomics; bio-mechanics; human-machine systems; occupational safety and other industrial hygiene issues; and ergonomics and human factors issues in aviation/space systems. Another area of continued research involvement is rehabilitation engineering, especially dealing with persons with severe physiological disabilities.

**Manufacturing Systems Engineering.** Emphases include planning, design, and control of manufacturing systems; CAD/CAM/CIM systems; measurement/inspection; GD&T; supply chain management; manufacturing processes; forming; composites manufacturing; and free-form surfaces manufacturing.

**Master of Science in Industrial Engineering**

The Master of Science in Industrial Engineering (MSIE) degree program offers tracks in all of the three areas described above. Students can complete the degree requirements through any of the following options: thesis, directed project, or all coursework.

**Admission Requirements**

In order to be admitted in the MSIE program, applicants must:

1. Possess an undergraduate degree in engineering, science, business, or other related discipline;
2. Have satisfactorily completed: MATH 344, Calculus III; IME 255, Engineering Economy; a natural sciences course equivalent to that of the undergraduate engineering requirement;
3. Have programming competence in C, C++, Visual Basic, or FORTRAN;
4. Have a minimum GPA of 3.000, on a 4.000 scale, in the last 60 hours of undergraduate courses and in all graduate courses (students with lower GPA may be considered only for probationary or nondegree admission); and
5. Indicate one of the following as a concentration area: engineering systems, ergonomics/human factors, or manufacturing systems engineering.

In addition,

6. Students with English as a second language must have a minimum score of 79 on the Internet-based, 213 on the computer-based, or 550
on the paper-based TOEFL or a minimum overall band score of 6.5 on the IELTS; students requesting financial assistance are encouraged to submit a TSE score (minimum acceptable score is 50); and
7. Students with an undergraduate degree from a program not accredited by ABET are encouraged to submit GRE scores.

**Degree Requirements**

1. Core courses: IME 549, Industrial Ergonomics; IME 550, Operations Research; IME 553, Production Systems; and IME 724, Statistical Methods for Engineers;
2. CESP 750D, Engineering Research Writing (1 credit hour);
3. Major area courses: at least 9 hours from a selected list of area courses;
4. Technical electives: from an approved list of courses (no more than 6 hours from another department);
5. Up to 12 hours may be transferred from another accredited graduate school;
6. Completion with at least 3,000 GPA of the minimum required graduate credit hours:
   - **Thesis Option**—a minimum of 24 hours of coursework plus 6 hours of thesis,
   - **Directed Project Option**—a minimum of 30 hours of coursework plus 3 hours of directed project,
   - **All Coursework Option**—a minimum of 33 hours of coursework plus a written core competency exam; and
7. An approved plan of study

**Master of Engineering Management**

The Master of Engineering Management (MEM) degree program is geared toward helping engineers/technologists develop planning, decision-making, and managerial skills while receiving advanced technical knowledge. Students should consider the MEM program if they find that they need to use (or develop) skills in decision making and management of teams, projects, and organizations. The MEM program is structured for practicing technical professionals.

**Admission Requirements**

To be admitted to the MEM program, applicants must:
1. Possess an undergraduate degree in engineering, technology, science, mathematics, or computer science (some additional courses may be needed to make up background deficiencies, if any);
2. Have at least two years of acceptable professional work experience (enclose a resume with admission application to provide experience information);
3. Have familiarity with and experience in using a personal computer, spreadsheet, and database software (such as, MS Excel, MS Access);
4. Have satisfactorily completed or have credit in MATH 243, Calculus II, and IME 255, Engineering Economy; and
5. Have a minimum GPA of 3.000 in the last 60 hours of undergraduate courses and in all graduate work.

In addition,
6. Students with English as a second language must have a minimum score of 79 on the Internet-based, 213 on the computer-based, or 550 on the paper-based TOEFL or a minimum overall band score of 6.5 on the IELTS; students requesting financial assistance are encouraged to submit a TSE score (minimum acceptable score is 50); and
7. Students with an undergraduate degree from a program not accredited by ABET are encouraged to submit a GRE score.

**Degree Requirements**

1. Completion with at least 3,000 GPA the minimum required graduate credit hours:
   - **Directed Project Option**—a minimum of 30 hours of coursework plus 3 hours of directed project,
   - **All Coursework Option**—a minimum of 33 hours of coursework plus a written core competency exam. The graduate coursework consists of 25 hours of core courses plus 8 hours of engineering electives;
2. Core courses: IME 550, Operations Research; IME 664, Engineering Management; IME 724, Statistical Methods for Engineers; IME 740, Analysis of Decision Processes; IME 764, Systems Engineering and Analysis; IME 854, Quality Engineering; MBA 800; MBA 801; and CESP 750D, Engineering Research Writing;
3. Electives: Two related engineering courses, one industrial and manufacturing engineering or business course (from a selected list); and
4. An approved plan of study.

Up to 12 hours may be transferred from another accredited graduate school.

**Doctor of Philosophy**

Courses of study leading to the Doctor of Philosophy (PhD) degree are available with specialization in any of the three areas discussed earlier. Details of the PhD program can be found at the beginning of this chapter.

**Certificate Programs**

The IME department offers graduate certificate programs in the topical areas described below. Students seeking any of these certificates must be admitted to the Graduate School (1) in one of the degree programs offered by the department, or (2) in a nondegree category A status. All Graduate School policies relative to admissions apply. International students will not be issued an I-20 for pursuing a certificate program only. They may obtain a certificate only while concurrently pursuing a graduate degree.

Students pursuing a graduate certificate must notify the program coordinator (in a written memo) that they wish to complete the certificate. This notification must occur before half of the required hours are completed. Via the submitted plan of study, requests to complete the certificate are reviewed by the program faculty and the dean of the Graduate School.

Students may apply certificate coursework toward a degree program. A cumulative graduate grade point average of at least 3.000 must be maintained for all courses comprising the certificate program with no grades below C.

**Advanced Manufacturing Analysis**

The courses in this certificate provide extensive information about the behavior of metals before, during, and after various processing operations; the mechanics and physics of operations; finite element-based analysis and design of processes; application of advanced finite-element technologies; and issues affecting the accuracy of finite-element simulations. Program prerequisites: IME 258, ME 250, and AE 333.

This program requires satisfactory completion of the following four courses (a total of 12 credit hours):
1. IME 558 Manufacturing Methods & Materials II
2. IME 758 Analysis of Manufacturing Processes
3. IME 768 Metal Machining Theory & Applications
4. IME 858 Non-Linear Finite Element Analysis of Metal Forming

**Composite Materials & Their Processing**

The courses in this certificate provide extensive information about technologies analysis involving composite materials and their processing.

Program prerequisites: MATH 555, AE 333, and ME 250. This program requires satisfactory completion of the following four courses (a total of 12 credit hours):
1. AE 653 Basic Composite Materials Technologies
Design for Manufacturing

This program allows practicing engineers to enhance their design skills by selecting a sequence of complimentary courses that includes knowledge of the product realization process and the impact of design considerations on manufacturing costs. Program prerequisites: IME 558, IME 524/724, and graphics/programming experience. This program requires satisfactory completion of the following four courses (a total of 12 credit hours):

IME 622 Computer-Aided Design & Manufacturing
IME 775 Computer-Integrated Manufacturing
IME 785 Tolerancing in Design and Manufacturing
IME 502 Manufacturing Measurement

Enterprise Systems and Supply Chain Management

This certificate is aimed at equipping students with a knowledge of key enterprise-level information technology systems and supply chain practices used by companies around the world. The courses are structured to provide extensive conceptual and applied information about enterprise-level systems and supply chain management. The curriculum is jointly offered by the decision sciences and MIS faculty in the School of Business and the industrial engineering faculty in the College of Engineering. Program prerequisites: DS 850 or IME 553, or equivalent. This program requires satisfactory completion of 9 hours of required courses and 3 hours of elective courses (a total of 12 credit hours):

Required Courses:
- DS 860 Enterprise Resource Planning
- IME 825 Enterprise Engineering
- DS 865 or IME 783 Supply Chain/Engr. Mgmt.

Elective Courses:
- DS 665 or IME 664 Project Management
- MIS 690 Special Topics: Configuration
- IME 746 Systems Engineering & Analysis
- MIS 884 Database Planning & Mgmt

Foundations of Six Sigma and Quality Improvement

This certificate program is primarily intended for individuals with industrial affiliation who may be interested in enhancing their skills in quality engineering and six sigma methodology. The program includes most of the Certified Six Sigma Black Belt (CSSBB) requirements outlined by the American Society for Quality (ASQ). Includes detailed coverage of applied statistical and managerial techniques most useful for process improvement, resource management, and design optimization. Program prerequisite: MATH 243, Calculus II. This program requires satisfactory completion of the following four courses (a total of 12 credit hours):

IME 724 Statistical Methods for Engineers
IME 854 Quality Engineering
IME 554 Statistical Quality Control
IME 755 Design of Experiments

Industrial Ergonomics and Safety

This program provides advanced knowledge and methodology of ergonomics and safety engineering for practitioners in industry who are responsible for the design and evaluation of work systems (tasks, materials, tools, equipment, workstations, and environments) for better usability, health, safety, and performance of workers in the workplace.

The curriculum focuses on the essential knowledge, analytical techniques, guidelines, regulations, and contemporary issues of ergonomics and safety engineering for the design and evaluation of various work systems in industry. Program prerequisites: MATH 243, Calculus II. This program requires satisfactory completion of the following four courses (a total of 12 credit hours):

IME 549 Industrial Ergonomics
IME 557 Safety Engineering
IME 724 Statistical Methods for Engineers
IME 760 Ergonomics Topics

Lean Systems

This program provides advanced knowledge and methodology of lean systems design, evaluation, and operation for practitioners in industry who are responsible for the development and management of production systems in the workplace. Curriculum focuses on the essential knowledge, analytical techniques, guidelines, and contemporary issues in the design, evaluation, and management of lean systems in industry. Program prerequisite: IME 550, Operations Research. This program requires satisfactory completion of the following four courses (a total of 12 credit hours):

IME 553 Production Systems
IME 724 Statistical Methods for Engineers
IME 783 Supply Chain Management
IME 767 Lean Manufacturing

Systems Engineering and Management

Students completing this program will be able to apply systems concepts and techniques to the understanding, description, design, and management of large-scale systems requiring the integration of information and human activity.

The curriculum focuses on the essential knowledge, analytical techniques, and contemporary issues in complex systems definition, design, and decision making. Program prerequisites: MATH 243, Calculus II. This program requires satisfactory completion of the following four courses (a total of 12 credit hours):

IME 664 Engineering Management
IME 724 Statistical Methods for Engineers
IME 740 Analysis of Decision Processes
IME 764 Systems Engineering and Analysis

Industrial and Manufacturing Engineering (IME)

Courses for Graduate/Undergraduate Credit

IME 524. Engineering Probability and Statistics II (3). A study of hypothesis testing, regression analysis, analysis of variance, correlation analysis, and design of experiments emphasizing applications to engineering. Prerequisite: IME 254.


IME 553. Production Systems (3). Quantitative techniques used in the analysis and control of production systems. Includes forecasting, inventory models, operations planning and scheduling. Prerequisite: IME 254. Corequisite: IME 255.


IME 555. Information Systems (3). Provides a basic understanding of information systems in a modern enterprise, including database design, information technology, and ethics using hands-on activities and directed classroom discussion. Prerequisites: IME 452 and CS 211 or MIS 310.


IME 558. Manufacturing Methods and Materials II (4). 3R. 3L. Covers theoretical and practical aspects of manufacturing processes, including material properties and behavior as influenced by the manufacturing process. In-depth study of such manufacturing processes as casting, heat treatment, bulk forming, sheet metal forming, metal cutting, non-traditional machining, and process monitoring through measurement of manufacturing process variables. Also includes laboratory experience and plant tours. Prerequisites: IME 258 and ME 250.
IME 563. Facilities Planning and Design (2). Quantitative and qualitative approaches to problems in facilities planning and design, emphasizing activity relationships, space requirements, materials handling and storage, and plant layout. Prerequisites: IME 258, 452, 550.

IME 565. Systems Simulation (3). The design of simulation models and techniques for use in designing and evaluating discrete systems, including manufacturing systems too complex to be solved analytically. Emphasizes general purpose computer simulation languages. Prerequisites: IME 553 and CS 211 or MIS 310. Corequisite: IME 524.

IME 576. Composites Manufacturing (3). 2R, 3L. Introduction to composite materials, the various manufacturing methods used in the aerospace industry and prevalent quality assurance methods. Students are introduced to inspection, damage control and repair techniques as well as material handling, safety and environmental requirements. Course contains laboratory modules designed to provide hands-on experience to emphasize the practical aspects of the topics covered. Prerequisites: AE 333 or instructor's consent.

IME 590. Industrial Engineering Design I (3). An industry-based team design project using industrial engineering and manufacturing engineering principles; performed under faculty supervision. May not be counted toward graduate credit. Prerequisites: must be within one year of graduation and departmental consent.


IME 664. Engineering Management (3). Introduction to the design and control of technologically based projects. Considers both the theoretical and practical aspects of systems models, organizational development, project planning and control, resource allocation, team development, and personal skill assessment. Prerequisites: IME 254 and 255.

IME 676. Aircraft Manufacturing and Assembly (3). Covers key aspects of assembly design for aircraft structures. First module covers design of jigs and fixtures to locate parts and machine features to tolerance and the effect of part and tool stiffness on the tolerances. Second module covers gage design and gage studies and geometric dimensioning and tolerancing. Third module covers assembly planning and best practices for aircraft assembly. Laboratory experiments and case studies are used to understand issues related to aircraft assembly. Prerequisite: IME 258.

IME 690. Industrial Engineering Design II (3). Continuation of the design experience of IME 590 in the performance of a second industry-based design project. May not be counted toward a graduate industrial engineering major. Prerequisites: IME 590 and departmental consent.

IME 724. Statistical Methods for Engineers (3). For graduate students majoring in engineering. Students study and model real-life engineering problems and draw reliable conclusions through applications of probability theory and statistical techniques. Not available for undergraduate credit. Prerequisite: MATH 243.


IME 740. Analysis of Decision Processes (3). Decision analysis as it applies to capital equipment selection and replacement, process design, and policy development. Emphasis is on the problem of risk, uncertainty, and multiple attributes is developed and applied using modern computer-aided design techniques. Prerequisites: IME 254 and 255.

IME 749. Advanced Ergonomics (3). A continuation of IME 549. Includes principles and application of human factors to the design of the workplace, displays, control systems, hand tools, and video display terminals. Prerequisite: IME 549.

IME 750. Industrial Engineering Workshops (1–4). Various topics in industrial engineering. Prerequisite: departmental consent.

IME 754. Reliability and Maintainability Engineering (3). Studies problems of quantifying, assessing, and verifying reliability. Presents various factors that determine the capabilities of components emphasizing practical applications. Examples and problems cover a broad range of engineering fields. Prerequisite: IME 524, or 724.

IME 755. Design of Experiments (3). Application of analysis of variance and experimental design for engineering studies. Includes general design methodology, single-factor designs, randomized blocks, factorial designs, fractional replication, and confounding. Prerequisite: IME 524, or 724.

IME 758. Analysis of Manufacturing Processes (3). Introduces students to plasticity and builds upon their knowledge of mechanics and heat transfer in order to analyze various manufacturing processes. Numerical techniques (mainly finite element analysis) as well as theoretical methods are introduced and applied to analysis of processes such as open and closed die forging, superplastic forming, machining, grinding, laser welding, etc. The effect of friction, material properties and process parameters on the mechanics of the processes and process outputs is the main focus of study. Prerequisite: AE 333.

IME 760. Ergonomics Topics (3). New or special courses on topics in ergonomics and human factors engineering. May be repeated for different topics. Prerequisite: departmental consent.

IME 764. Systems Engineering and Analysis (3). Presentation of system design process from the identification of a need through conceptual design, preliminary design, detail design and development, and system test and evaluation. Studies operational feasibility, reliability, maintainability, supportability, and economic feasibility. Prerequisites: IME 254, 255.

IME 767. Lean Manufacturing (3). Introduces lean concepts as applied to the manufacturing environment. Deals with the concepts of value, value stream, flow, pull, and perfection. Includes waste identification, value stream mapping, visual controls, and lean metrics. Prerequisite: IME 553.

IME 768. Metal Machining: Theory and Applications (3). Provides basic understanding of the various conventional metal machining processes and the nature of various phenomena that occur and includes fundamental treatments of the mechanics of chip formation under orthogonal and oblique conditions, temperatures in machining, tool materials, tool wear, surface roughness, and numerical and mechanistic modeling methods, and discusses current research trends and possible future developments. Prerequisite: AE 333 or ME 250.

IME 775. Computer Integrated Manufacturing (3). A study of the concepts, components, and technologies of CIM systems; enterprise modeling for CIM; local area networks; CAD/CAM interfaces; information flow for CIM; shop floor control; and justification of CIM systems. Prerequisites: knowledge of a programming language, IME 558.

IME 778. Machining of Composites (3). Introduces students to plasticity and builds upon their knowledge of mechanics and heat transfer in order to analyze various manufacturing processes. Numerical techniques (mainly finite element analysis) as well as theoretical methods are introduced and applied to analysis of processes such as open and closed die forging, superplastic forming, machining, grinding, laser welding, etc. The effect of friction, material properties and process parameters on the mechanics of the processes and process outputs is the main focus of study. Prerequisite: AE 333.

IME 781. Cooperative Education (1–8). A work-related placement with a supervised professional experience to complement and enhance the student's academic program. Intended for master's level or doctoral students in IME. Repeatable for credit. May not be used to satisfy degree requirements. Prerequisite: departmental consent and graduate GPA of 3.000 or above. Cr/NC only.

IME 783. Supply Chain Management (3). Quantitative and qualitative techniques used in the design and management of the supply chain. Includes distribution management, multi-plant coordination, optimal design of the logistics network, adequate safety stock levels and the risk pooling concept, and integrating decision support systems (DDS) in the management of the supply chain. Prerequisite: IME 553.

IME 785. Tolerancing in Design and Manufacturing (3). Provides a basic understanding of the theory and application of tolerancing in design, manufacturing, and inspection. Reviews current literature in the area of tolerancing and inspection. Includes detailed discussion of the ASME standards on geometric dimensioning and tolerancing (GD&T), GD&T verification procedures, tolerance analysis and allocation, statistical tolerancing, and Taguchi's approach to tolerancing. Prerequisite: IME 254 or instructor's consent.
Courses for Graduate Students Only

IME 825. Enterprise Engineering (3). How to design and improve all elements associated with the total enterprise through the use of engineering and analysis methods and tools to more effectively achieve its goals and objectives. Deals with the analysis, design, implementation and operation of all elements associated with an enterprise. Includes business process reengineering, graphical enterprise modeling tools and architectures, and enterprise transformation. Prerequisite: IME 553.

IME 835. Applied Forecasting Methods (3). A study of the forecasting methods, including smoothing techniques, time series analysis, and Box-Jenkins models. Prerequisite: IME 524.

IME 854. Quality Engineering (3). A broad view of quality tools and their integration into a comprehensive quality management and improvement system. Covers the theory and approaches of the major quality leaders such as Deming, Juran, and Crosby. Explores off-line and online quality engineering techniques, including cost of quality, the seven "old" and seven "new" tools, Quality Function Deployment, and statistical process control methods. Explores design of engineering experiments, including Taguchi's methods. Prerequisite: IME 524.

IME 858. Non-Linear Finite Element Analysis of Metal Forming (3). Introduces the use of an LS-DYNA software package for metal forming simulations and discusses the theoretical foundation necessary to understand the physics and mechanics behind some of the options that need to be used to ensure solution accuracy in FEA of metal forming. Prerequisite: AE 722 or ME 650K or IME 780K.

IME 864. Risk Analysis (3). Provides a set of methods that have been widely used to evaluate and void the risk of technological systems and devices in engineering applications. The methods introduced are multi-disciplinary in terms of the scope of the methodology and the concepts that are being applied in many industries. Students are expected to have an engineering background and the capability of using statistics and operations research tools. Prerequisites: IME 724, or 754, or instructor's consent.

IME 865. Modeling and Analysis of Discrete Systems (3). Discusses analytical and experimental techniques for the modeling and analysis of discrete systems in general and manufacturing systems in particular. Students use techniques such as simulation, Markov Chains, Queuing Theory, and Petri Nets to model manufacturing systems problems. Students investigate issues related to the modeling and analysis of manufacturing systems through readings, lectures and projects. Prerequisite: IME 553 or instructor's consent.

IME 875. System Dynamics (3). Introduction to, and overview of, system dynamics, using business and engineering examples. Topics include: systems thinking, structure and behaviors of dynamic systems, causal loop diagrams, stocks and flows, dynamics of stocks and flows, dynamics of growth, modeling dynamic systems including instability and oscillations, model testing, and use of software for model development and testing. Prerequisite: instructor's consent.


IME 877. Foundations of Neural Networks (3). For students from a variety of disciplines. Introduces the theory and practical applications of artificial neural networks. Covers several network paradigms, emphasizing the use of neural networks as a solution tool for industrial problems which require pattern recognition, predictive and interpretive models, pattern classification, optimization, and clustering. Presents examples and discusses them from a variety of areas including quality control, process monitoring and control, robotics control, simulation metamodeling, economic analysis models, diagnostic models, combinatorial optimization, and machine vision.

IME 878. MS Directed Project (1–3). A project conducted under the supervision of an academic adviser for the directed project option. Requires a written report and an oral presentation on the project. Graded S/U only. Prerequisite: consent of academic adviser.

IME 880. Topics in Industrial Engineering (3). New or special courses are presented under this listing on sufficient demand. Repeatable for credit when subject matter warrants.

IME 890. Independent Study in Industrial Engineering (3). Analysis, research, and solution of a selected problem. Prerequisite: instructor's consent.

IME 930. Multiple Criteria Decision Making (3). An extensive treatment of techniques for decision making where the multiple criteria nature of the problem must be recognized explicitly. Prerequisite: IME 550.

IME 950. Occupational Biomechanics (3). Theoretical fundamentals of the link system of the body and kinetic aspects of body movement. Includes application of biomechanics to work systems. Prerequisites: IME 549 and AE 223.

IME 960. Advanced Selected Topics (1–3). New or special courses on advanced topics presented under this listing on sufficient demand. Prerequisite: instructor's consent.


IME 990. Advanced Independent Study (1–3). Arranged individual, independent study in specialized content areas. Repeatable toward the PhD degree. Prerequisites: advanced standing and departmental consent.

Mechanical Engineering

Graduate Faculty

Professors: Hamid M. Lankarani, Tiruvadi Ravigururangan (graduate coordinator), George E. Talia (chairperson)

Associate Professors: Ikram Ahmed, Brian Driessen, David N. Koert (undergraduate coordinator), Bob Minai

Assistant Professor: Ramazan Asmatulu

The department of mechanical engineering offers courses of study leading to the Master of Science (MS) and Doctor of Philosophy (PhD) degrees. Departmental faculty have developed research activities in four areas of specialization:

- materials science and engineering (including composites processing; nano- and biocomposites; nanotechnology);
- energy and thermal-fluid sciences (including alternative fuels and fuel safety; non-Newtonian and viscoelastic materials; bio-fluids and bio-heat transfer; computational fluid dynamics and heat transfer);
- mechanical systems analysis and design (including vehicle crashworthiness and impact dynamics; acoustics); and
- robotics and control (including biosensors and biomedical devices; non-linear control).

State of the art research laboratories within the department complement the above activities. In addition, faculty members are associates of Wichita State's National Institute for Aviation Research (NIAR). This association makes NIAR facilities available for the research activities of these faculty and their graduate students.

Research facilities include the computational fluid dynamics laboratory (CFD lab) with a linux-based network, the crash dynamics laboratory, the shock and vibration laboratory, the computer integrated manufacturing laboratory, and the mechatronics laboratory.

Departmental facilities in the Engineering Research building:

- Nanotechnology Laboratory
- Nanocomposites and Biocomposites Laboratory
- Biodynamics Laboratory
- BioDevice Laboratory
- Acoustic Measurements and Material Characterization Laboratory
- Thermal Spray Coating Materials Laboratory
- Advanced Joining Processes and Assembly Lab
- Controls Laboratory
- Fuel and Fire Safety

The department's programs and efforts are influenced by the concentration of technology-oriented industries in the Wichita area. Particular attention is given to scheduling coursework so that engineers employed by local industry may pursue a graduate degree in mechanical engineering.

Master of Science

In addition to the general admission requirements for all engineering students, mechanical engineering students need an undergraduate degree in engineering or physical sciences, a grade point average of 3.00/4.00 or First Class standing, and a statement of purpose.
indicating research interests. Scores for the general test of the GRE (Graduate Record Examination) are strongly recommended to be considered for graduate assistantship positions.

Courses of study leading to the MS degree are available with specialization in any of the departmental faculty research areas described earlier. Details of the MS program can be found under the College of Engineering heading. Additional information can be obtained at: wichita.edu/mechanical.

Doctor of Philosophy

In addition to the general admission requirements for all engineering students, mechanical engineering students must have a grade point average of 3.250 in all graduate work. They must also submit two letters of recommendation from graduate faculty and a statement of purpose indicating their research interests, as well as official GRE (general) scores.

Areas of research specialization for the Doctor of Philosophy (PhD) program are within those stated previously for the MS degree. Exact specialties will depend upon the student’s dissertation adviser and graduate committee. Other details of the Doctor of Philosophy (PhD) program can be found at the beginning of this chapter. Additional information can be obtained at: wichita.edu/mechanical.

Courses for Graduate/Undergraduate Credit

Courses required for the BS degree normally are not permitted for use toward the graduate degree in mechanical engineering.

ME 502. Thermodynamics II (3).* Continuation of ME 398, emphasizing cycle analysis, thermodynamic property relationships, and psychrometrics, with an introduction to combustion processes and chemical thermodynamics. Prerequisite: ME 398.

ME 521. Fluid Mechanics (3).* Basic equations of fluid mechanics. Study of flow in closed conduits and over immersed bodies. Includes compressible flow, turbomachinery, and measurements in fluid mechanics. Prerequisites: ME 398, MATH 555 and AE 373.

ME 522. Heat Transfer (3).* Temperature fields and heat transfer by conduction, convection, and radiation. Steady and transient multidimensional conduction, free and forced convection, and combined heat transfer. Discusses various analytical methods, analogies, numerical methods, and approximate solutions. Prerequisite: ME 521.

ME 533. Mechanical Engineering Laboratory (3). 2R; 3L.* Introduces the basics of engineering measurements. Discusses related theory, followed by applications in such areas as strain, sound, temperature, and pressure measurements. Format includes lectures, recitation (which presents the concept of the experiment to be performed and the required data analysis), and laboratories. Analyzes the data obtained from measuring systems set up and operated in the laboratory to demonstrate and reinforce fundamental concepts of engineering mechanics. Prerequisites: EE 262 and ME 333. Corequisite: ME 522.

ME 541. Mechanical Engineering Design II (3). Applications of engineering design principles to the creative design of mechanical equipment. Problem definition, conceptual design, feasibility studies, design calculations to obtain creative solutions for current real engineering problems. Introduction to human factors, economics, and reliability theory. Group and individual design projects. Prerequisite: ME 439.

ME 544. Design of HVAC Systems (3). Analysis and design of heating, ventilating, and air-conditioning systems based on psychrometrics, thermodynamics, and heat transfer fundamentals. Focuses on design procedures for space air-conditioning and heating and cooling loads in buildings. Prerequisites: ME 521 and 522 or equivalent.

ME 602. Engineering for the Environment (3). Engineering for the environment, air, water, and noise pollution, and handling of hazardous wastes. Covers briefly the main pollutants, their major sources, their effects, and their attainment levels set by the U.S. Environmental Protection Agency. Emphasizes engineering systems for pollution control. Prerequisites: ME 398, AE 223, IME 255, or departmental consent.

ME 631. Heat Exchanger Design (3). Covers analytical models for forced convection through tubes and over surfaces, experimental correlations for the Nusselt number and pressure drop, design of single and multiple pass shell and tube heat exchangers; compact baffled, direct contact, plat, and fluidized bed heat exchangers, radiators, recuperators, and regenerators. Prerequisites: ME 521 and 522, or equivalent.

ME 633. Mechanical Engineering Systems Laboratory (3). 2R, 3L.* Selected experiments illustrate the methodology of experimentation as applied to mechanical and thermal systems. Experiments include the measurement of performance of typical systems and evaluation of physical properties and parameters of systems. Group design and construction of an experiment is an important part of the course. Team and individual efforts are stressed as are written and oral communication skills. Prerequisites: ME 533, ENGL 102.

ME 637. Computer-Aided Engineering (3). 2R, 3L Integrates computer-aided design, finite element analysis, kinematics analysis, heat transfer analysis, and other considerations for design of mechanical components and systems. Provides a blend of theory and practice. Corequisite: ME 339 or equivalent.

ME 639. Applications of Finite Element Methods in Mechanical Engineering (3). 2R, 3L. Introduces the finite element method (FEM) as a powerful and general tool for solving differential equations, arising from modeling practical engineering problems. Finite element solutions to one- and two-dimensional mechanical engineering problems in fluid mechanics, heat transfer, solid mechanics, and vibrations. Includes Galerkin’s and variational finite element models. Introduces commercial finite element computer tools such as ANSYS. Prerequisite: ME 439 or 522, or equivalent.

ME 641. Thermal Systems Design (3). Modeling, simulation, and optimization used as tools in the design of thermal systems. Engineering design principles, characteristics of thermal equipment, and economic considerations. Studies open-ended problems, including work on design projects in small groups. Prerequisites: ME 502 and 521.

ME 650. Selected Topics in Mechanical Engineering (1–3).* New or special topics are presented on sufficient demand. Repeatable for credit when subject matter warrants. Prerequisite: departmental consent.

ME 659. Mechanical Control Systems (3).* Cross-listed as EE 684. Modeling and simulation of dynamic systems. Theory and analysis of the dynamic behavior of control systems, based upon the laws of physics and linear mathematics. Concerns classical methods of feedback control systems and design. Prerequisites: a) EE 282 and MATH 555, or b) EE 383.

ME 662. Senior Capstone Design (3). 1R; 6L.* An exercise in the practice of mechanical engineering; students engage in a comprehensive design project requiring the integration of knowledge gained in prerequisite engineering science and design courses. Team effort and both oral and written presentations are a part of the experience. Prerequisite: mechanical engineering students in their last semester of study.

ME 664. Introduction to Fatigue and Fracture (3). Deals with the primary analytical methods used to quantify fatigue damage. These are the stress life approach, strain life approach, and the fracture mechanics approach. Prerequisite: ME 250.

ME 665. Selection of Materials for Design and Manufacturing (3). Focuses on the selection of engineering materials to meet product and manufacturing requirements. Solution to various product and manufacturing problems by appropriate selection of materials is illustrated through the use of numerous examples and case studies. Prerequisites: ME 250, AE 333.

ME 667. Mechanical Properties of Materials I (3). Major focus on deformation mechanisms and on crystal defects that significantly affect mechanical properties. Also covers plasticity theory, yield criteria for multi-axial states of stress, fracture mechanics, and fracture toughness. Includes some review of basic mechanics of materials and elasticity as needed. Prerequisite: ME 250 or departmental consent.

ME 669. Acoustics (3). Fundamentals of acoustics including the study of simple harmonic systems, acoustic waves, transmission phenomena, and environmental and architectural acoustics. Prerequisites: MATH 555, AE 373.

ME 678. Studies in Mechanical Engineering (1–3).* Arranged individual, independent study in specialized content areas in mechanical engineering under the supervision of a faculty member. Requires written report or other suitable documentation of work for departmental records. Three (3) hours maximum technical elective credit. Not for graduate credit. Prerequisite: departmental consent.

ME 682. Engineering Applications of Computational Fluid Dynamics and Heat Transfer (3). Reviews the basic laws of fluid flow and heat transfer including the Navier-Stokes equations. Applications include CFD software emphasizing the finite volume method and introducing turbulence modeling. Additional topics...
include grid generation and benchmarking exercises as well as open-ended projects. Prerequisites: ME 325 (or AE 227) and ME 522 (or AE 424) with a minimum grade of C in each, or instructor's consent.

ME 709. Injury Biomechanics (3). Offers insight into the trauma problem and methods used to quantify and reduce it. Research methods used in injury biomechanics and their limitations are discussed including tests with human volunteers, cadavers, animals, mechanical crash test dummies, and computer models. Provides a basic understanding of injury mechanisms and tolerances for the different body parts, including head, spine, thorax, and extremities. Presents both automotive and aircraft impact safety regulations on occupant protection and related biomechanical limits. Students are exposed to and gain experience in using mathematical/numerical/computer models for injury biomechanics. Replaces ME 750T. Prerequisite: instructor's consent.

ME 710. Basic Combustion Theory (3). Introduction to the fundamental principles of combustion processes. Examines the chemistry and physics of combustion phenomena, that is, detonation and flames, explosion and ignition processes. Prerequisites: CHEM 211 and ME 502.

ME 729. Computer-Aided Analysis of Mechanical Systems (3). Modeling and analysis of planar motion for multibody mechanical systems including automatic generation of governing equations for kinematic and dynamic analysis, as well as computational methods and numerical solutions of governing equations. Open-ended student projects on engineering applications such as vehicle tire stability simulations for different terrains. Prerequisites: ME 339, AE 373, and MATH 555.

ME 737. Robotics and Control (3). A systems engineering approach to robotic science and technology. Fundamentals of manipulators, sensors, actuator, end-effectors, and product design for automation. Includes kinematics, trajectory planning, control, programming of manipulator, and simulation, along with introduction to artificial intelligence and computer vision. Prerequisite: ME 659 or equivalent.

ME 739. Advanced Machine Design (3). A broad coverage of principles of mechanical analysis and design of machine elements. Emphasizes dynamic system modeling, prediction of natural frequencies and forced response, effect of support flexibility, failure theories used in design, and fatigue life prediction. Typical mechanical systems studied are gears, bearings, shafts, rotating machinery, and many types of spring-mass systems. Uses fundamentals learned in mechanics, strength of materials, and thermal sciences to understand mechanical system modeling, analysis, and design. Prerequisite: ME 541 or instructor's consent.

ME 747. Microcomputer-Based Mechanical Systems (3). 2R; 3L. Microcomputer-based real-time control of mechanical systems. Familiarizes students with design and methodology of software for real-time control. Includes an introduction to the C programming language which is most relevant to interfacing and implementation of control theory in computer-based systems. Laboratory sessions involve interfacing microcomputers to mechanical systems and software development for control methods such as PID. Prerequisite: ME 659 or instructor's consent.

ME 750. Special Topics in Mechanical Engineering (1–3). New or special topics are presented on sufficient demand. Repeatable for credit when subject material warrants. Prerequisite: departmental consent.

ME 755. Intermediate Thermodynamics (3). Laws of thermodynamics, introduction to statistical concepts of thermodynamics, thermodynamic properties, chemical thermodynamics, Maxwell's relations. Prerequisite: ME 502 or departmental consent.

ME 758. Nonlinear Controls of Electro-Mechanical Systems (3). The standard first nonlinear controls course. Covers stability; feedback linearization (robotic, mechanical, electro-mechanical system applications); differentially-flat systems (with rotor-craft position-tracking applications); back-stepping control-design methods (electro-mechanical, robotic, and rotor-craft applications); MIMO systems; normal form; zero dynamics; and adaptive control of robotic systems. EE 792, Linear Systems, while not a prerequisite, is helpful.

ME 760. Fracture Mechanics (3). Covers fracture mechanics in metals, ceramics, polymers and composites. Suitable for graduate and undergraduate study in metallurgy and materials, mechanical engineering, civil engineering, and aerospace engineering where a combined materials-fracture mechanics approach is stressed. Prerequisite: ME 250 or departmental consent.

ME 762. Polymeric Composite Materials (3). Designed to provide students with an understanding and knowledge about the polymeric composite materials. The characteristics of various composite manufacturing processes are presented and their capabilities and limitations are highlighted. Materials and manufacturing process design and engineering for polymeric composites are discussed. Prerequisites: ME 250 and MATH 555 or instructor's consent.

ME 767. X-Ray Diffraction (3). Theory of X-ray diffraction, experimental methods, and their applications which can include determination of the crystal structure of materials, chemical analysis, stress and strain measurements, study of phase equilibria, measurement of particle size, and determination of the orientation of a single crystal. Prerequisites: ME 250 and AE 333 or departmental consent.

ME 769. Impact Dynamics (3). Classical methods are presented to analyze mechanical components and structures for impact response. Impact methods include stereomechanics, contact mechanics, impulse-momentum, stress-wave, energy method, and plastic impact. Finite element analysis (FEA) modeling of impact events are examined and applied to classical methods. Material properties evaluation for impact conditions, design techniques for impact and shock mitigation, and an introduction to crushworthiness are also presented. Course goals are to understand characteristics such as loading, stresses, deflections, contact forces and material response to impact events. Prerequisite: ME 439 or instructor's consent.

ME 781. Cooperative Education (1–8). A work-related placement with a supervised professional experience to complement and enhance the student's academic program. Intended for master's level or doctoral students in mechanical engineering. Repeatable for credit. May not be used to satisfy degree requirements. Offered Cr/Gr only. Prerequisites: graduate standing, departmental consent, and graduate GPA of 3.00 or above.

* Normally not permitted for use toward the graduate degree in mechanical engineering.

Courses for Graduate Students Only

ME 801. Boundary Layer Theory (3). Development of the Navier-Stokes equation, laminar boundary layers, transition to turbulence, turbulent boundary layers, and an introduction to homogeneous turbulence. Prerequisite: ME 521 or departmental consent.

ME 802. Turbulence (3). An overview of the theory, practical significance, and computation of turbulent fluid flow. Prerequisites: ME 521 and 801.

ME 829. Advanced Computer-Aided Analysis of Mechanical Systems (3). Computational methods in modeling and analysis of spatial multibody mechanical systems. Includes Euler parameters; automatic generation of governing equations of kinematics and dynamics; numerical techniques and computational methods; computer-oriented projects on ground vehicles with suspension and steering mechanisms, crushworthiness, and bio-dynamics. Prerequisite: ME 729 or instructor's consent.

ME 847. Applied Automation and Control Systems (3). 2R; 3L. Control theory condensed to engineering practice with the analysis, design, and construction of operating control systems. Experiments with pneumatic, hydraulic, and electro-mechanical servo-systems. Implementation of feedback and feed forward control schemes for various industrial systems and machine tools. The experiments are project-oriented and intended to be representative of the current state-of-the-art in classical and modern control practice. Prerequisite: ME 659 or equivalent.

ME 850. Special Topics in Mechanical Engineering (3). New or special topics are presented on sufficient demand. Repeatable for credit when subject material warrants. Prerequisite: departmental consent.

ME 854. Two-Phase Flow Heat Transfer (3). Thermodynamic and mechanical aspects of interfacial phenomena, boiling, and condensation near immersed surface, pool boiling, internal flow convective boiling, and condensation. Prerequisites: ME 522, MATH 555, or departmental consent.

ME 860. Introduction to Ceramics (3). Introduces the fundamental principles of ceramic science and engineering with application on ceramics processes and fabrications. Presents the concepts and properties using the crystal structure background. Discusses nonequilibrium aspect of phase relation in ceramics systems and their influence on processing parameters. Covers the microstructure form by liquid, liquid-solid, and solid-state reaction with some detail in combination with heat treatment. Students are expected to have backgrounds in chemistry, physics, math, thermodynamics, mechanics of solids, and introduction to materials in undergraduate engineering courses.

ME 864. Physical Metallurgy (3). Covers a range of basic concepts in physical metallurgy essential for further study in materials engineering. Topics include structure and diffraction, dislocations, defects and thermal processes, solid solution and hardening, diffusion, and phase
diagrams and transformations. Prerequisites: ME 250 and 398, AE 333, or departmental consent.

ME 866. Advanced Fracture Mechanics (3). Covers the fracture mechanics of elastic-brittle, ductile, time dependent, and heterogeneous materials at an advanced level. The material is suitable for graduate study only in metallurgy and materials, mechanical engineering, and aerospace engineering where a combined materials-fracture mechanics approach is stressed. Prerequisites: ME 250, AE 333, or departmental consent.

ME 867. Mechanical Properties of Materials II (3). After a brief review of pertinent concepts of the macro-mechanical behavior of deformable bodies, course focuses on deformation mechanisms and on crystal defects that significantly affect mechanical properties and strengthening mechanisms. This includes point, line, and planar crystalline defects; dislocation dynamics; and various hardening and strengthening mechanisms. Concludes with discussion of physical properties and testing methods to measure these properties. Prerequisite: ME 667 or departmental consent.

ME 876. Thesis (1–4). Repeatable for credit toward the MS thesis option up to 6 hours. Graded S/U only. Prerequisite: consent of MS thesis adviser.

ME 878. MS Directed Project (1–3). A project conducted under the supervision of an academic adviser for the directed project option. Requires a written report and an oral presentation on the project. Graded S/U only. Prerequisite: consent of academic adviser.

ME 890. Independent Study in Mechanical Engineering (1–3). Arranged individual, independent study in specialized content areas. Prerequisite: instructor's consent.

ME 901. Advanced X-Ray Diffraction Theory (3). First part concentrates on the fundamental X-ray diffraction theories including dynamical theory of X-ray and anomalous absorption, with which a serious student in this field must be thoroughly familiar. Second part emphasizes the general theory of X-ray diffraction in a concise and elegant form using Fourier transforms. The general theory is then applied to various atomic structures, ideal crystals, imperfect crystals, and amorphous bodies. Prerequisites: ME 767, MATH 757.

ME 960. Advanced Selected Topics (1–3). New or specialized advanced topics in mechanical engineering. Prerequisite: instructor's consent.

ME 962. Advanced Ceramics (3). Covers concepts in ceramics science and engineering essential to understanding and using advanced ceramic materials such as high temperature metaloceramics. Expands coverage of fundamental concepts and physical properties presented in ME 860. Provides deeper understanding of crystalline solids and characteristic properties of ceramics. Incorporates many of the most recent advances in the area. Students are expected to have backgrounds in chemistry, physics, math, thermodynamics, mechanics of solids, and introduction to materials in undergraduate engineering courses.


ME 990. Advanced Independent Study (1–16). Arranged individual, independent study in specialized content areas. Repeatable toward the PhD degree. Prerequisites: advanced standing and instructor's consent.

The following abbreviations are used in the course descriptions: R stands for lecture and L for laboratory. For example, 4R; 2L means 4 hours of lecture and 2 hours of lab.
College of Fine Arts

Offices: 112 Jardine Hall
Rodney Miller, dean
Wendy Hanes, assistant dean
Ronald Christ, coordinator for graduate studies in art
Mark Foley, coordinator for graduate studies in music

School of Art and Design
(316) 978-3555—Barry Badgett, director
Art Education, (316) 978-7718—Mary Sue Foster, program director
Art History, (316) 978-7715—Frederick Hemans, program director
Graphic Design, (316) 978-7709—Jim Hellman, program director
Studio Art, (316) 978-5467—James Brewer, interim program director

School of Music
(316) 978-3500—TBA, director
Music Education Studies, (316) 978-6125—TBA, program director
Musicology-Composition Studies, (316) 978-6278—Dean Roush, program director
Keyboard Studies, (316) 978-6235—Andrew Trechak, program director
String/Orchestra Studies, (316) 978-6202—Mark Laycock, program director
Voice/Choral Studies, (316) 978-6473—Dorothy Crum, program director
Winds/Percussion/Band Studies, (316) 978-6424—Victor A. Markovich, program director

School of Performing Arts
(316) 978-3462—Linda Starkey, director
Dance, (316) 978-3645—C. Nicholas Johnson, program director
Music Theatre, (316) 978-3462—Linda Starkey, program director
Theatre, (316) 978-3646—Bret Jones, program director

Fine Arts (FA)
Although there is no graduate degree in general fine arts, the following courses are available for graduate credit.

Courses for Graduate/Undergraduate Credit

FA 590. Special Topics in the Fine Arts (1–4). For group instruction. May be repeated for credit. Involves interdisciplinary upper-division/graduate-level topics with the fine arts (music, art, dance, and theatre). Prerequisite: senior undergraduate or graduate standing or instructor’s consent.

FA 781. Cooperative Education (1–8). Field placement which integrates coursework with a planned and supervised professional experience designed to complement and enhance the student’s academic program. Individualized programs must be formulated with, and approved by, appropriate faculty sponsors and cooperative education coordinators. Note: a maximum of 4 S/U or Cr/NCr credits may be counted toward a graduate degree and must be taken in consultation with the graduate adviser for the approved graduate plan of study. May be repeated for credit. Offered S/U or Cr/NCr only. Prerequisite: satisfactory academic standing prior to the first job assignment.

School of Art and Design
Barry Badgett, director
Annette LeZotte, associate director

The School of Art and Design offers programs leading to the Master of Fine Arts degree. Students seeking the Master of Fine Arts degree select an emphasis in ceramics, painting, printmaking, or sculpture. The specific requirements are described under the appropriate program listing, below:

Art Education (ARTE)
Graduate Faculty
Professor: Mary Sue Foster

Although applications are not being accepted for the graduate program in art education, the following courses are available for graduate credit.

Courses for Graduate/Undergraduate Credit

ARTE 510. Stimulating Creative Behavior (3). Includes theories of creativity; strategies for problem finding and problem solving; identifying various external and internal blocks to creativity; testing for creativity; the relationships of creativity, cognition, and visual thinking; creative challenges; and stimuli. Emphasizes methods to elicit creative behavior. Repeatable once for credit.

ARTE 514. Aesthetic Inquiry (3). Focuses on contemporary trends in aesthetics relative to the visual arts. Students write critical observations and interpretations in response to artwork. Prerequisite: upper-division art major.

ARTE 515. Developing Visual Materials for Art Education (3). A production laboratory that emphasizes the integration and selection of appropriate visual media for art instruction. Prerequisite: ARTE 310 or equivalent.

ARTE 517. Student Teaching Seminar in Art (1). Analyzes problems encountered in the art classroom during student teaching. Requires concurrent enrollment in student teaching courses. Prerequisites: ARTE 410, CI 328, CESP 433; 2.500 GPA overall. Corequisites: ARTE 462 and/or ARTE 459 and program approval for student teaching.

ARTE 550. Art Workshop (1–3). Repeatable for credit. Area covered is determined at the time the course is offered.

ARTE 702. Metal Processes for Jewelry Construction (3). Emphasizes fabrication techniques, design analysis, and function of jewelry designed and produced by students and acknowledged craftsmen.
Students use medium and large format photography equipment, traditional and digital technology to create cohesive formal and conceptual photography projects. Prerequisites: ARTG 431 or 432.

ARTG 530. Seminar in Graphic Design (3). Supervised study and research. Requires weekly consultation and reports. Repeatable for credit. Prerequisite: instructor's consent.

**Art History (ARTH)**

**Graduate Faculty**

*Associate Professor: Annette LeZotte (associate director)*

*Assistant Professor: Royce Smith*

Although there is no graduate degree in art history, the following courses are available for graduate credit.

**Courses for Graduate/Undergraduate Credit**

**ARTH 520. Seminar in Art History (3).** Systematic study in selected areas of art history. Course content varies but individual areas are not repeatable for credit.

**ARTH 528. Museum Techniques I (3).** Primarily for the graduate student interested in museum work. Includes specialized research related to the administrative responsibilities of a museum: collection, exhibition, recording, preservation, and financial activities.

**ARTH 532. Independent Study in Art History (1–3).** Work in a specialized area of the study of art history. Directed readings and projects. Prerequisite: instructor's consent.

**ARTH 533. Seminar: Topics in Modern Art (1–3).** Selected readings and problems in art of the modern era. Course content varies but individual areas are not repeatable for credit.

**ARTH 732. Independent Study in Art History (1–3).** Work in specialized area of the study of art history. Directed readings and projects for graduate students in all disciplines. Prerequisite: instructor's consent.

**Courses for Graduate Students Only**

**ARTH 832. Independent Study (1–3).** Individually supervised work in a specialized area of art history. Directed readings, research, and projects. Repeatable for credit. Prerequisites: suitable preparation for graduate work in art history (e.g., BA or BFA in art history) and instructor's consent.

**Studio Art (ARTS)**

**Graduate Faculty**

*Professor: Ronald Christ (graduate coordinator)*

*Associate Professor: Barry Badgett (director), Robert Bubp (foundations coordinator)*

*Assistant Professor: Ted Adler, Monika Meler, Levente Sulyok*

*Facilities Director: James Brewer*

**Master of Fine Arts**

The Master of Fine Arts (MFA) degree, the terminal degree for studio art, is offered for qualified students planning careers as professional artists, either working independently or as artist-teachers on the college or art school level. The program offers an emphasis in ceramics, painting, printmaking, or sculpture.

**Admission Requirements**

Admission without deficiencies requires a grade point average of at least 2.750 based upon the last 60 hours of coursework, the other general requirements of the Graduate School, with the additional requirement of a 3.000 grade point average in the emphasis (ceramics, painting, printmaking, or sculpture). Also required is a Bachelor of Fine Arts (BFA) degree, or the equivalent of a BFA, that includes a minimum of 12 hours of art history, 15 hours in the emphasis, and 20 hours of related work. Completed application materials must be received by the first Wednesday in February for admission to the following fall semester and the first Wednesday in October for the following spring semester. The Graduate Record Examination (GRE) is not a requirement for admission.

**Application Procedures**

Applicants should forward the following to:

Graduate School, Box 4, Wichita State University, 1845 Fairmount, Wichita, KS 67260-0004.

1. Completed application for admission to Graduate School. On-line application: Graduate School Web site wichita.edu/gradschool. Paper application: Contact the Graduate School (316) 978-3095, gradinquiry@wichita.edu, or the Graduate School Web site;

2. Non-refundable application fee; and

3. Two official transcripts of all college-level academic work in sealed envelopes.

Applicants should forward the following to:

Graduate Coordinator, School of Art and Design, Campus Box 67, Wichita State University, 1845 Fairmount, Wichita, KS 67260-0067.

1. Completed application for graduate assistantship if applying for a GTA position;

2. Portfolio with 15–20 examples of recent work (color slide, JPEG or PowerPoint presentation in CD-ROM). Identify all examples with a number and provide title, size, medium and date information;

3. Printed, numbered example list with the same descriptive information as the portfolio;

4. Statement of intent outlining artistic goals in the emphasis, anticipated minor or minors, professional objectives and expectations of graduate study experience;

5. Artist statement outlining artistic philosophy and the nature of work presented in the portfolio;
6. Resume listing education, academic and art awards and recognition, exhibitions and any relevant information;

7. Three original letters of recommendation from faculty or art professionals with whom the applicant has recently studied or worked. Recommenders should mail the letters directly to the School of Art and Design graduate coordinator; and

8. Self-addressed pre-paid envelope for the return of portfolio examples. No application is considered complete until all of the numbered items above are received.

Students holding degrees from institutions where requirements differ from those at Wichita State may be required to take undergraduate courses to make up deficiencies as determined by the emphasis faculty and the graduate art coordinator.

Questions regarding application procedures should be directed to:
Graduate Coordinator
School of Art and Design
Wichita State University
1845 Fairmount
Wichita, Kansas 67260-0067
(316) 978-7707
ronald.chris@ wichita.edu

Degree Requirements
Minimum course requirements for completion of the MFA degree are summarized below. In addition, 45 of the 60 hours must be taken in courses numbered 800 or above.

Course................................. Hrs.
Studio courses in the emphasis .................. 23
Studio courses in the minor or minors outside the emphasis ......................... 12
Courses in art history, art seminar, or university electives*......................... 12
ARTS 895 Prof. Practices in Studio Art ....... 2
ARTS 790 Graduate Teaching Seminar ...... 1
Terminal project in the emphasis .............. 10
Total..................................................60

*A minimum of 6 hours must be art history. A maximum of 6 hours may be pertinent university electives approved by adviser and graduate coordinator.

The terminal project consists of an exhibition of original studio artwork, accompanied by the MFA terminal project report, which is a documentation of the candidate’s studio work (slides, video, photographs, CD), a written statement, and a resume.

Plan of Study. In order to define a program of study for the graduate degree, students must submit the Graduate Plan of Study form leading to admission to candidacy for the degree no later than one month following the completion of 24 credit hours of graduate credit.

Graduate Review. MFA degree students must satisfactorily complete graduate reviews conducted in their emphasis at the end of each fall and spring semester. At this time, the graduate faculty make observations and recommendations regarding the quality of the students’ works and their standing in the program. No graduate review is held during summer session.

Transfer of Credit. All graduate credit accepted for transfer will be at the discretion of the departmental adviser and graduate coordinator and must meet the transfer of credit conditions of the Graduate School. A maximum of 24 credit hours from prior graduate study may be considered for transfer to the MFA program. Final determination of transfer will be made after the student has successfully completed 12 credit hours at WSU and the first graduate review. A maximum of 12 credit hours can be applied to the emphasis. If a transfer of credit is allowed, it may reduce course requirements but not entrance requirements. A ruling on hours converted to the MFA program by the dean of the Graduate School, graduate coordinator, and the emphasis faculty is final. Graduate non-degree work obtained before admission to a planned degree program will not be accepted.

Required Prerequisite. Students who have not been accepted to degree standing in the MFA Studio program may enroll in 800-level courses only with written consent of the course faculty and graduate coordinator.

Examinations. At the beginning of and during the semester in which the degree is to be conferred, two interviews between candidates and their committees are conducted. The proposed content of the MFA exhibition is discussed and evaluated. The graduate committee’s findings, upon final review and the MFA terminal exhibition, are submitted to the Graduate School by the emphasis faculty and graduate coordinator. This procedure constitutes the terminal examination for MFA candidates.

Policy On Retention of Student Work
Conforming to College Art Association MFA Standards Guidelines, retention of student work without compensation is not required.

General
Courses for Graduate/Undergraduate Credit
ARTS 790, Graduate Teaching Seminar (1).
Discussion seminar for graduate students already teaching or intending to teach. Meets six to eight times per semester. Class format is discussion. Students participate in discussions, read articles and essays, create teaching philosophy, create academic portfolio. Not repeatable for credit. Graded S/U only.

Courses for Graduate Students Only
ARTS 800, Seminar in Art Topics (3). Explores areas of common interest in the arts. Supervised study, research, and discussion. Repeatable for credit.

ARTS 895, Professional Practices in Studio Art (2). Research into and practical application of professional practices, business skills, and career planning specific to the discipline of studio art. Provides a foundation of practical information to assist the graduate studio art major in building a successful professional career. Not repeatable for credit.

Ceramics
Courses for Graduate/Undergraduate Credit
ARTS 570, Advanced Ceramics (4). Builds on ARTS 373. Investigates advanced studies of clay bodies, glazes, and firing methods. Emphasis on self-directed study and critical analysis. Preparation for ARTS 577. Repeatable for credit. Prerequisites: ARTS 373 and/or instructor’s consent.


ARTS 574, Advanced Study of Kiln Methods (3). Advanced study of kiln firing design, and construction with emphasis on excautive research. Requires reading assignments, notebook, and laboratory work. Prerequisite: ARTS 374.

ARTS 575. Study of Ceramic Materials II (3). Lab fee. Lectures and research covering clays, glazes, and refractory materials. Reading assignments concerning physical and chemical characteristics of pottery materials. Prerequisites: ARTS 275 and 370.

ARTS 576. Study of Ceramic Glazes II (3). Lab fee. The study of glaze formulation and the color and crystalline effects of oxides on base glazes. Requires notebook, formulation records, and laboratory work. Prerequisite: ARTS 575.

ARTS 577, Ceramics Senior Project (4). Culminating course in BFA studio art/ceramics emphasis. Continued emphasis on individual development. Written senior project proposal and review, critiques with art and design faculty outside of ceramics emphasis, senior project exhibition, written statement, and review required. Prerequisites: ARTS 570 or 572, completion of/concurrent enrollment in ARTS 495, and/or instructor’s consent.

ARTS 578, Independent Study in Ceramics (1–3). A professional emphasis on technical or aesthetic research in the ceramics field. Available only for the advanced ceramics student with instructor’s consent. Statement of intent...
must be submitted for faculty approval before registration. Prerequisite: departmental consent.

Courses for Graduate Students Only

ARTS 870. Special Problems in Ceramics (1–5). Research in advanced problems in ceramics. Repeatable for credit.

ARTS 875. Advanced Research of Ceramic Materials (3). Lectures and advanced research covering clays, glazes, and refractory materials. Reading assignments concerning physical and chemical characteristics of pottery materials. Requires notebook and outside laboratory work.

ARTS 876. Advanced Study of Ceramic Glazes (3). The study of glaze formulation and the color and crystalline effects of oxides on base glazes. Requires note- book, advanced formulation records, and laboratory work. Prerequisite: ARTS 875.


Drawing

Courses for Graduate/Undergraduate Credit

ARTS 545. Advanced Drawing Studio (1–3). Drawing with a variety of media. Uses graphic problems relative to individual technical and aesthetic development. Critiques are given. Repeatable for credit. Prerequisites: ARTS 340 and 345.

ARTS 549. Independent Study in Drawing (1–3). A professional emphasis on technical or aesthetic research in the drawing area. Available only for the advanced drawing student with instructor's consent. Statement of intent must be submitted for faculty approval before registration. Prerequisites: ARTS 340, 345, and instructor's consent.

Courses for Graduate Students Only

ARTS 840. Special Problems in Life Drawing (1–3). Drawing from life. Requires sketchbooks and/or portfolio. Repeatable for credit.

ARTS 845. Special Problems in Drawing (1–3). Advanced drawing in various media emphasizing independent work and the development of personal expression. Repeatable for credit.

Painting

Courses for Graduate/Undergraduate Credit

ARTS 553. Independent Study in Painting (1–3). A professional emphasis on technical or aesthetic research in the painting area. Available only for the advanced painting student with instructor's consent. Statement of intent must be submitted for faculty approval before registration. Prerequisite: departmental consent.


ARTS 557. Painting Senior Project (4). Culminating course in BFA studio art/painting emphasis. Continued emphasis on individual development. Written senior project proposal and review, critiques with art and design faculty outside of painting emphasis, senior project exhibition, written statement, and review required. Prerequisite: ARTS 554, completion of/concurrent enrollment in ARTS 495, and/or instructor's consent.

Courses for Graduate Students Only

ARTS 850. Special Problems in Painting (1–5). Professional and experimental painting emphasizing the development of maturity, ideas, independent thinking, and personal expression. Media include oil, watercolor, and synthetic media. Repeatable for credit with the consent of the drawing/painting faculty.

ARTS 858–859. Terminal Project—Painting (1–5; 1–5).

Printmaking

Courses for Graduate/Undergraduate Credit

ARTS 560. Advanced Intaglio (4). Students may specialize in any of the various intaglio, relief, collagraph, paper-casting techniques while emphasizing personal aesthetic development. Preparation for ARTS 567. Repeatable for credit. Prerequisite: ARTS 362.

ARTS 561. Advanced Lithography (4). Students may specialize in any of the various lithography techniques while developing a personal aesthetic direction. Preparation for ARTS 567. Repeatable for credit. Prerequisite: ARTS 361, 363.

ARTS 565. Independent Study in Printmaking (1–3). A professional emphasis on technical and aesthetic research in the printmaking area. Only for the advanced printmaking student with instructor’s consent. Statement of intent must be submitted for faculty approval before registration. Prerequisite: departmental consent.

ARTS 567. Printmaking Senior Project (4). Culminating course in BFA studio art/printmaking emphasis. Continued emphasis on individual development. Written senior project proposal and review, critiques with art and design faculty outside of printmaking emphasis, senior project exhibition, written statement, and review required. Prerequisite: ARTS 560 or 561, completion of/concurrent enrollment in ARTS 495, and/or instructor's consent.

Courses for Graduate Students Only

ARTS 860. Special Problems in Printmaking—Intaglio (1–5). Advanced printmaking on an individual basis. Gives encouragement to investigation, combined with a craftsman-like approach. Techniques include all intaglio, relief, and combined methods, black and white, and color. Repeatable for credit.

ARTS 862 & ARTS 863. Special Problems in Printmaking—Lithography (1–5; 1–5). Advanced printmaking on an individual basis. Gives encouragement to investigation, combined with a craftsman-like approach. Includes lithography and allied techniques, black and white, and color. Repeatable for credit.


Sculpture

Courses for Graduate/Undergraduate Credit


ARTS 585. Independent Study in Sculpture (1–3). A professional emphasis on technical or aesthetic research in the sculpture area. Available only for the advanced sculpture student with instructor’s consent. Statement of intent must be submitted for faculty approval before registration. Prerequisite: departmental consent.

ARTS 587. Sculpture Senior Project (4). Culminating course in BFA studio art/sculpture emphasis. Continued emphasis on individual development. Written senior project proposal and review, critiques with art and design faculty outside of sculpture emphasis, senior project exhibition, written statement, and review required. Prerequisites: ARTS 580, completion of/concurrent enrollment in ARTS 495, and/or instructor's consent.

Courses for Graduate Students Only

ARTS 880. Special Problems in Sculpture (1–5). Advanced sculpture emphasizing experimentation and high-quality work on an individual basis. Stresses special projects in casting architectural sculpture, mixed media, or new materials and techniques. Repeatable for credit.


School of Music

TBA, director

Mark Foley, coordinator, graduate studies

Graduate degree programs in the School of Music are designed to extend and broaden the professional competency of men and women desiring careers in music. Students may pursue graduate studies in history-literature, theory-composition, music education, performance, conducting, and pedagogy. While providing for advanced training in the specific skills of music, these graduate programs help to cultivate the student’s capacity to think—to consider...
impersonally, dispassionately, and without prejudice any problem related to the art of music.

**Master of Music**
The Master of Music degree (MM) allows for concentration in history—literature, piano pedagogy, theory—composition, conducting, and performance. The general requirements for the degree are outlined below, while the specific course requirements for each concentration are given in the program sections (music education, musicology—composition, music performance) in which the concentrations are housed.

**Admission Requirements**
Admission to the MM program requires the completion of an accredited music bachelor’s degree that includes a minimum of 60 credit hours in music, with at least 24 hours in basic music studies (history and theory) and 15 hours in a major specialty. Approval of the MM concentration must be acquired during the first semester of enrollment.

**Degree Requirements**
The MM degree requires completion of a minimum of 32 graduate credit hours, including a thesis or recital as indicated for the respective concentration. Of these hours, 60 percent must be in courses numbered 700 or above. Each plan of study must include MUSC 852, Introduction to Bibliography and Research; MUSC 830, Seminar in Music Theory; and 6 hours elected from graduate courses in music history and literature (MUSC 791, Seminar in Music History, or elections from the graduate period courses: MUSC 893, Music of Antiquity–Renaissance, through MUSC 897, Music of the 20th Century). Advisor’s approval must be obtained for all courses included in the degree plan of study.

**Examinations**
All degree candidates in the School of Music must pass an oral comprehensive examination. The oral comprehensive examination for thesis candidates includes a thesis defense.

**Music Education (MUSE)**

**Graduate Faculty**
Professors: Elaine Bernstorf, John Paul Johnson, Thomas Wine
Associate Professor: Thomas Fowler
Assistant Professor: Steve Oare

**Master of Music Education**
The Master of Music Education (MME) program allows for concentration in elementary music, choral music, instrumental music (with recital option), music in special education, and voice. Conducting options may be elected (with approval) in the choral and instrumental programs.

**Admission Requirements**
Admission to the degree program in music education requires the completion of a Bachelor of Music Education (BME) degree, or the equivalent of a BME, from an accredited institution. Students holding bachelor's degrees in music other than the Bachelor of Music Education must satisfy public school certification requirements to qualify for full admission. Applicants without such certification are admitted on a conditional basis pending their attainment of public school teaching credentials. Approval of the MME specialization must be acquired.

**Degree Requirements**
MME programs range from 32 to 36 hours. The required core is 15 hours; 15 field specialty hours must be decided in consultation with an advisor and the director of music education; five terminal options are available: recital, conducting project, thesis, terminal project, and an extra hours option. Of these hours, 12 must be in courses numbered 700 or 800. Each plan of study must include MUSC 852, Introduction to Bibliography and Research; MUSE 851, Psychology of Music; MUSE 853 Research Design and Methods; MUSE 871, History and Philosophy of Music Education; and MUSC 830, Seminar in Music Theory. Three hours also are required in graduate music history. Students choosing to complete the 15 hour specialization in Kodály must complete the requirements for an appropriate emphasis area in addition to the Kodály course sequence.

Qualified students requesting permission to present a formal graduate recital should obtain approval from the appropriate performance area before completing 12 hours of graduate enrollment. A recital is not a terminal requirement option for the MME in special education.

**Courses for Graduate/Undergraduate Credit**
MUSE 606. Music Methods for Early Childhood Education (2–3). Methods and materials for teaching music in the preschool and kindergarten classroom. Includes the development of the child's musical growth through singing, listening, rhythm, and creative activities; a survey of available materials; and development of playing, singing, and conducting skills.

MUSE 611. Music for Special Education (2). Open to upper-division or graduate students and intended for the potential practicing music teacher, classroom teacher, or special education teacher. Includes identification of dysfunctioning children and their problems and current theory and practices in special music education. Satisfies the requirement, effective September 1, 1981, that applicants for initial certification or renewal of secondary and/or elementary certification shall present a survey course, or equivalent content from other courses, in the subject area of exceptional children. This provision applies to initial certification and recertification of music teachers only, grades K–12.

MUSE 617. Literacy Strategies for Content Areas: Music (2). Covers principles and strategies used in effective instruction, including vocabulary development and comprehension skills needed to more fully read to learn in content areas. Students receive training to use the six-trait analytical rating guide for assessing writing, which is the method used to score the Kansas state writing assessment. Students develop lessons and assessments appropriate for a comprehensive literacy-based music program based on national and state music standards representing appropriate and varied music education philosophies. Replaces both MUSE 317 and 790V. Prerequisites: MUSE 303 or 304, or instructor's consent.

MUSE 686. Marching Band Techniques (2). A systematic approach to the marching band with regard to organization, show development, instrumentation, music adaptation, drill construction, and script development. Teaches both traditional drill and corps-style marching using manual methods and computer generated graphics. Field observations, films, photographs, and live performances by marching bands complement the class syllabus. Required for all instrumental majors.

MUSE 732. Music in the Junior High School (3). Includes administrative structures, the curriculum, adolescent development, teaching as behavior, and competencies needed for successful teaching of general and choral music in grades 6–9.

MUSE 750. Music Education Workshop (1–4). Repeatable for credit.


MUSE 762. Kodály Solfege Level One (2). Includes one- and two-part materials in major and minor tonalities. Demonstrated ability to conduct folk song literature appropriate for beginning singers. Replaces MUSE 751Q. Prerequisite: prior or concurrent enrollment in MUSE 761.

MUSE 763. Kodály Methods Level Two (3). Kodály curriculum designed for grades 2–4. Song analysis for 50 additional folk songs and appropriate literacy activities for general music programs. Added emphasis on folk dance and listening lessons for masterworks. Replaces MUSE 751O. Prerequisite: MUSE 761 and 762 or instructor's consent. Concurrent enrollment with MUSE 764 recommended.

MUSE 764. Kodály Solfege Level Two (2). Adds choral, whole tone and modes. Demonstrated ability to conduct folk song literature up to four parts. Replaces MUSE 751T. Prerequisite MUSE 762.

MUSE 765. Kodály Methods Level Three (3). Kodály curriculum designed for grades 4–12. Expansion of song repertoire with emphasis on activities which develop choral singing independence and music theory skills. Replaces MUSE 751Y. Prerequisites: MUSE 763 and 764,
or instructor's consent. Concurrent enrollment with MUSE 766 recommended.

MUSE 766. Kodaly Solfege Level Three (2). Includes advanced materials from a variety of literature. Demonstrates the ability to conduct expanded literature appropriate for public and private school choral programs. Replaces MUSE 751V. Prerequisites: MUSE 762 and 764.

MUSE 781. Cooperative Education (1–8). A field placement which integrates coursework with a planned and supervised professional experience designed to complement and enhance the student's academic program. Individualized programs must be formulated with, and approved by, appropriate faculty sponsors and cooperative education coordinators. Note: a maximum of 4.5 U or Cr/NCr hours may be counted toward a graduate degree and must be taken in consultation with the graduate adviser for an approved graduate plan of study. Prerequisite: satisfactory academic standing prior to the first job assignment. May be repeated for credit. Offered Cr/NCr only.

MUSE 785. Instrumental Music Organization and Administration (2). Problems of developing school instrumental music programs.

MUSE 790. Special Topics in Music (1–4). For individual or group instruction. Individual student enrollment requires departmental consent. Repeatable for credit with departmental consent.

Courses for Graduate Students Only

MUSE 821. Leadership and Administration in Music Education (3). Investigates research and strategies in music education relating to communication, classroom management, current trends, and teaching and learning styles. Includes teacher assessments and evaluation issues.

MUSE 822. Advanced Techniques in Special Music Education (3). For special music education MME candidates only. Studies research literature and trends in special music education. Includes an evaluation of materials and techniques and special projects exploring the development of musical understanding in the functioning child. Course satisfies the requirement, effective September 1, 1981, that applicants for initial certification or renewal of secondary and/or elementary certification shall present a survey course, or equivalent content from other courses, in the subject area of exceptional children. This provision applies to initial certification and recertification of music teachers only. Prerequisite: MUSE 403 or 404.

MUSE 823. Special Music Education Practicum (3). For special music education MME candidates only. Supervised teaching in special education classrooms. A companion course to MUSE 822, gives the MME special education candidate experience in teaching in special education classrooms. Pre- or corequisite: MUSE 822.

MUSE 831. Developing the Child’s Musical Understanding (3). Definition of understandings necessary for the attainment of musical awareness in the child. Directed the exploration of classroom experiences toward the successful development of understanding through the application of basic learning principles. Prerequisite: MUSE 403.

MUSE 841. Special Project in Music (1–3). Individually supervised study or research emphasizing the student's personal needs. Repeatable for credit. Prerequisite: instructor's consent.

MUSE 842. Special Project in Music (1–3). Individually supervised study or research emphasizing the student’s personal needs. Repeatable for credit. Prerequisite: instructor's consent.

MUSE 844. Terminal Conducting Project (2). Individually supervised project for those accepted for the conducting option in the instrumental or choral emphasis under the MME degree. Prerequisites: instructor's and departmental consent.


MUSE 851. Psychology of Music (2). An overview of music behaviors from a psychological perspective. Relates recent literature concerning human psychoacoustics; melody, rhythm, and harmonic perception; and major learning theories to current trends in music education.

MUSE 853. Research Design and Methods (2). Includes historical, philosophical, qualitative, quantitative, meta-analysis and action research. Prepares graduate students to reflectively analyze research related to learning theory, curriculum, and administrative topics associated with relevant arts education applications. Prerequisite: graduate status.

MUSE 854. Terminal Project in Music Education (3). Continued application of techniques of research. Requires the completion of a major research project. May be selected as the MME terminal requirement for specified programs. Prerequisite: MUSE 852.

MUSE 857. History and Philosophy of Music Education (2). A study of historical trends and contemporary philosophies relevant to music education. Prerequisite: MUSE 851.

MUSE 871. History and Philosophy of Music Education (2). A study of historical trends and contemporary philosophies relevant to music education. Prerequisite: MUSE 851.

MUSE 875. Thesis Research (1–2). Requires the completion of a major research project. May be selected as the MME terminal requirement for specified programs. Prerequisite: MUSE 852.

MUSE 876. Thesis (2).

Music Performance (MUSP)

Graduate Faculty

Professors: Julie Bees, Dorothy Crum (director voice/choral), Sylvia Coats, Victor Markovich (director bands and winds/percussion), Frances K. Shelly, Nicholas Smith, Russell D. Widener

Associate Professors: Deborah E. Baxter, Catherine Consiglio, Lynne Davis, Mark Foley, Robert Glasemann, Marie King, Nancy Luttrel, Pina Moazzani, Andrew Trechak (director, keyboard studies)

Assistant Professors: Jacqueline Dillon, Donald Duncan, Gerald Scholl, Paul Smith, Suzanne Tirk

Master of Music (MM) Degree Programs

MM—Performance

Admission to the Master of Music (MM) program in music performance requires a performance background, with a Bachelor of Music (BM) degree in the performance area of specialization or the equivalent of the BM. Background deficiencies must be satisfied before admission to candidacy. All performance degree candidates must complete a satisfactory audition in their performance area of specialization. The audition should be completed as early as possible—but no later than the end of the first semester of enrollment. Permission to pursue the degree/concentration is tentative pending approval of the respective performance faculty.

A formal graduate recital, in lieu of a thesis, must be presented in partial fulfillment of the requirements for the MM degree with emphasis in performance.

In order to receive permission to schedule a degree recital, students must satisfy the expectations of the respective performance area. Recital permission must be obtained no later than the semester before the semester in which the recital is to be performed. The student's performance repertoire and the recital program must be in accordance with the guidelines and expectations established by the respective performance area.

Students studying for the MM degree with emphasis in performance should plan to be in residence during at least one fall or spring semester, since continuous study opportunities may not exist in summer session.

MM—Opera Performance Concentration

This degree program is designed to provide specialized training in opera performance with graduates gaining more experience and training in all phases of opera production. While the present MM in vocal performance degree provides for some experience with opera performance, the opera concentration will provide greater focus with more specialized coursework, training, and experience, which will better prepare students who are accepted into the program to succeed in this competitive career field. The degree requires 4 more hours (total of 36) than the MM in vocal performance.

Admission Requirements

Admission to the program is based on the results of a live audition and an interview with the director of the WSU Opera Theatre and voice faculty. When a live audition is not possible, a video tape audition will be considered. Students admitted to this program must show
potential for future success and should have already had some experience with opera. Specific requirements include (1) strong operatic vocal potential; (2) good academic background with a minimum 2.750 GPA; (3) some stage experience, including a basic acting class; and (4) working knowledge in at least one of the following languages: French, German, or Italian.

Degree Requirements
The Master of Music (MM) degree with a concentration in opera performance requires the completion of a minimum of 36 graduate hours, including a graduate performance recital, two leading roles in opera productions, and direction and assistance in two productions. This degree must include the following courses:

1. Twelve credit hours in the MM core requirement, including MUSC 852, Introduction to Bibliography and Research (3); MUSC 830, Seminar in Music Theory (3); and 6 credit hours in selected graduate music history courses;

2. Ten credit hours of Applied Voice plus the 2 credit hours of Graduate Recital; and

3. Twelve credit hours of courses in the major area, including MUSC 623, Opera Literature (3); MUSC 726, Opera Styles (2); MUSP 773, Acting for Singers (3); MUSC 712K, Opera Theatre (2); MUSC 711K, Opera Theatre (2).

MM—Instrumental Conducting Concentration
The Master of Music (MM) degree, instrumental conducting concentration, is designed to accommodate a small number of students (up to four per year) who receive extensive individualized conducting preparation with the university’s resident band and orchestra conductors. Candidates have rehearsal/conducting opportunities with both large and small ensembles. The program culminates in a conducting recital using university students and ensembles; metropolitan or ad hoc ensembles may be substituted with faculty approval.

Admission Requirements
Students must have completed a Bachelor of Music in piano performance or its equivalent. All candidates must complete a satisfactory audition early in the program—in no event later than the close of the first semester of enrollment. Permission to pursue the degree is tentative pending approval of the audition. Deficiencies, if noted, must be satisfied before admission to candidacy for the degree.

Degree Requirements
The Master of Music degree with a concentration in piano accompanying gives primary attention to the development of accompanying skills and artistry; secondary, but significant, emphasis is placed on an acceptable demonstration of keyboard performance at the master’s degree level. The accompanying concentration includes preparation in the area of instrumental and vocal literature in relation to the need for piano accompaniment in the area of performance development.

Admission Requirements
Students must have completed a Bachelor of Music in piano performance or its equivalent. All candidates must complete a satisfactory audition early in the program; in no event later than the close of the first semester of enrollment. Permission to pursue the degree is tentative pending approval of the audition. Deficiencies, if noted, must be satisfied before admission to candidacy for the degree.

Degree Requirements
The Master of Music (MM) degree with a concentration in piano accompanying requires the completion of a minimum of 33 graduate hours, including two accompanied full-hour degree recitals (one vocal and one instrumental recital in either order). The degree must include the following courses:

1. Twelve credit hours in the MM core requirement including MUSC 852, Introduction to Bibliography and Research (3); MUSC 830, Seminar of Music Theory (3), and 6 credit hours in selected graduate music history courses;

2. Four credit hours of Applied Piano (memorized jury examinations), MUSA 732P and 8 credit hours of Applied Accompanying, MUSP 723 (4), MUSP 724 (4);

3. Seven credit hours of support courses, including MUSP 580, Piano Pedagogy (2), MUSC 726, Voice Literature (3), and MUSC 685, String Literature (2); and

4. Two credit hours, terminal project—two accompanied full-hour degree recitals, MUSP 871 (1), MUSP 872 (1).

MM—Piano Pedagogy Concentration
The Master of Music (MM) degree with a concentration in piano pedagogy gives primary attention to the development of tutorial concepts specific to keyboard skills and artistry; secondary, but significant, emphasis is placed on an acceptable demonstration of keyboard performance at the master's degree level. The pedagogy option includes extensive preparation in the area of keyboard literature and stresses the relationship of performance to selected repertoire and teaching-skill development.

Admission Requirements
Students must have completed a Bachelor of Music in piano performance or its equivalent. All candidates must complete a satisfactory audition early in the program—in no event later than the close of the first semester of enrollment. Permission to pursue the degree is tentative pending approval of the audition. Deficiencies, if noted, must be satisfied before admission to candidacy for the degree.

Degree Requirements
The MM degree, piano pedagogy concentration, requires the completion (minimum) of 32 graduate hours, including a graduate degree recital or a 2-hour professional inservice presentation project (MUSP 874) as the terminal requirement. Of these hours, 20 must be in courses numbered 700–800. The degree must include the following courses:

1. MUSC 852, Introduction to Bibliography & Research (3);
2. MUSC 830, Seminar in Music Theory (3);
3. Election of a minimum of two courses (6 hours) in graduate music history-literature from MUSC 893, Music of Antiquity through the Renaissance, through MUSC 897, Music of the 20th Century (or MUSC 791, Seminar in Music History); and
4. Pedagogy and literature courses as specified in the pertinent MM (piano pedagogy) curriculum guide.

Applied Music—Private Study (MUSA)

Courses for Graduate/Undergraduate Credit
MUSA 712. Applied Music Instruction for Non-majors (2). Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable for credit.
MUSA 731. Applied Music Instruction (1). For majors only; study on secondary instruments. Basic instruction. Repeatable for credit. Graduate.

MUSA 732. Applied Music Instruction (2). For majors only; Repeatable for credit. Graduate.

MUSA 734. Applied Music Instruction (4). For performance and pedagogy majors or students preparing for master's degree recitals only. Repeatable for credit. Graduate.

**Applied Music Media Designations**

| A | Bassoon | P | Piano |
| B | Cello | Q | Viola da Gamba |
| C | Clarinet | R | String Bass |
| D | Euphonium | S | Trombone |
| E | Flute | T | Trumpet |
| F | French Horn | U | Tuba |
| G | Classical Guitar | V | Viola |
| J | Guitar | W | Violin |
| K | Harp | X | Saxophone |
| L | Oboe | Y | Voice |
| M | Organ | Z | Electric Bass |

**Applied Music—Class Instruction**

**Courses for Graduate/Undergraduate Credit**

MUSA 717W. Violin Class for Adult Beginners (2). Beginning violin class: violin fundamentals, emphasizing tone and intonation development, basic techniques for reading (notes and rhythm). May not be applied to music major requirements. Repeatable for credit.

MUSA 717Y. Popular Vocal Styles (2). Class voice instruction for adults emphasizing basic vocal technique and how it can be applied for use in popular styles of singing, including vocal jazz, pop, music theatre, etc. Gives students an opportunity to explore techniques for developing their own voices and to practice singing in a supportive environment. Includes information via lecture, demonstration, and listening to recordings related to stylistic differences in the popular idiom. Intended for non-music majors; not applicable to music degree requirements. Repeatable.

**Music Performance—General (MUSP)**

**Courses for Graduate/Undergraduate Credit**

MUSP 580. Piano Pedagogy (2). Primarily the art and science of teaching. Includes observations of master teachers in the university and community.

MUSP 581. Piano Teaching Materials (2). A survey of teaching methods and materials from beginning through early advanced levels.

MUSP 620. String Pedagogy: Violin and Viola (2). Required for violin and viola performance majors. A study of tutorial techniques for violin and viola, including the teaching of mini-lessons for instructor and class critique. Prerequisite: violin or viola performance capability or instructor's consent.

MUSP 625. Voice Pedagogy (2). Acquaints the voice major with vocal techniques, concepts, and materials of private and class instruction.

MUSP 651. Advanced Conducting and Score Reading (2). Baton technique, score reading, and musicianship. Prerequisite: MUSP 307 or 308 or equivalent.

MUSP 680. Woodwind Pedagogy (2). A comprehensive study of woodwind instrument techniques, concepts, and materials of studio instruction for the advanced student, including the teaching of mini-lessons for instructor and class critique. Prerequisite: performance capability on a woodwind instrument or instructor's consent.

MUSP 681. Brass Pedagogy (2). A comprehensive study of brass instrument techniques, concepts, and materials of studio instruction for the advanced student, including the teaching of mini-lessons for instructor and class critique. Prerequisite: performance capability on a brass instrument or instructor's consent.

MUSP 682. Percussion Pedagogy (2). A comprehensive study of percussion instrument techniques, concepts, and materials of studio instruction for the advanced student, including the teaching of mini-lessons for instructor and class critique. Prerequisite: performance capability on percussion instruments or instructor's consent.

MUSP 691. Advanced Choral Conducting (2). A comprehensive study of conducting and rehearsal techniques, analysis, and ear training and types of choral composition for the advanced student. Prerequisite: MUSP 307 or 308 or equivalent.


MUSP 711E. Opera Lab (1). See MUSP 211E.

MUSP 711K. Opera Theatre (1). See MUSP 211K.

MUSP 711U. Musical Theatre Performance (1). Cross-listed as DANC 320 and THEA 590E. See MUSP 211U.

MUSP 712K. Opera Theatre (2). See MUSP 212K.

MUSP 714K. Opera Theatre (4). See MUSP 414K.

MUSP 715Y. Voice for Music Theater (2). Basic repertoire and singing techniques with weekly master class devoted to music theater techniques and concepts. Restricted to persons other than vocal majors. Repeatable.

MUSP 723. Applied Piano Accompanying (4). Individual private study of standard accompaniment literature with preparation of a terminal project recital (either vocal or instrumental). Prerequisite: successful completion of two semesters of graduate piano study.

MUSP 724. Applied Piano Accompanying (4). Individual private study of standard accompaniment literature with preparation of a terminal project recital (either vocal or instrumental). Prerequisite: successful completion of two semesters of graduate piano study.

MUSP 725. Voice Pedagogy II (2). Builds on the basics explored in Voice Pedagogy, giving particular attention to a deeper understanding of voice science, vocal literature, pedagogical techniques, and materials which prepare students to teach advanced and collegiate students. Prerequisite: MUSP 625, or instructor's consent.


MUSP 760. Group Piano Practicum (2). Supervised group piano teaching for graduate students. Prerequisites: MUSP 580 and 581.

MUSP 761. Studio Piano Practicum (2). Supervised studio teaching for graduate students. Prerequisites: MUSP 580 and 581.

MUSP 762. Opera Styles (2). A comprehensive study of the performance styles and practices in operatic singing, ranging from the 17th century to the present. Prerequisite: instructor's consent.

MUSP 773. Acting for Singers (3). Studies the external and internal techniques of acting for the singer, emphasizing characterization and development of a role, to ensure that students have the necessary understanding and skills to integrate the acting process while singing. Prerequisite: instructor's consent.

MUSP 790. Special Topics in Music (1–2). For individual or group instruction. Repeatable with departmental consent.

MUSP 790E. Musical Theatre and Opera Audition (3). Cross-listed as THEA 630. Practicum course develops techniques and audition repertory singers need to gain professional employment and/or successfully compete for placement in advanced training programs. Also covers the business skills necessary to a professional career, and brings students into contact with professional guest artists who can provide additional insight and contacts. Prerequisite: instructor's consent.

MUSP 790Q. Special Topics in Music and Foreign Language (1–5). Cross-listed as MCLL 790Q (College of Fine Arts). Allows undergraduate and graduate students to take courses in the modern foreign languages together with individualized instruction in the translation and
diction of poetical texts set to music. Course may be used to satisfy the foreign language requirement of the Bachelor of Music in performance—vocal emphasis. Repeatable for credit. Prerequisite: instructor's consent.

Courses for Graduate Students Only

MUSP 841. Special Project in Music (1–3). Individual study or research emphasizing the personal needs of the student. Repeatable for credit. Prerequisite: instructor's consent.

MUSP 842. Special Project in Music (1–3). Individualized study or research emphasizing the personal needs of the student. Repeatable for credit. Prerequisite: instructor's consent.

MUSP 843. Piano Pedagogy Seminar (2). Variable topics, such as (1) advanced techniques in class piano or private piano (college curriculums); (2) class piano in early childhood; (3) class piano for leisure-age students; (4) class piano in public (or private) schools, extending the advanced preparation of piano pedagogy students as needed. Repeatable for credit. Prerequisite: MUSP 580.

MUSP 871. Graduate Accompanying Recital (1). Required for MM piano majors, vocal accompanying emphasis. Prerequisites: the student must have completed 18 hours toward the degree, including two semesters of applied piano and be enrolled in MUSP 723 or 724.

MUSP 872. Graduate Accompanying Recital (1). Required for MM piano majors, instrumental accompanying emphasis. Prerequisites: the student must have completed 18 hours toward the degree, including two semesters of applied piano and be enrolled in MUSP 723 or 724.

MUSP 873. Graduate Recital (2). Performance of a full recital featuring the chief performing medium. Prerequisite: consent of instructors in applied area.

MUSP 874. Professional In-Service Presentation Project (2). Planning, organizing, and presenting a three-hour in-service presentation (workshop) to in-service private piano teachers, perhaps in conjunction with an established community piano teacher's league, etc. Available as a terminal requirement alternative (in lieu of performance recital) in the Master of Music—piano pedagogy emphasis. Students approved for this terminal requirement option are also required to perform a major piano recital, prepared at acceptable recital level, during semester jury examination within the final year (two semesters) of the degree program. Requires approval of piano performance area faculty. Prerequisite: departmental consent.

Musicology—Composition (MUSC)

Graduate Faculty

Professors: Walter A. Mays, Katherine Murdock, Dean Roush (program director, musicology—composition)

Associate Professor: Silvia Herzog Carruthers

Master of Music (MM) Degree Programs

MM History—Literature Concentration

Completion of a Master of Music (MM) degree, history—literature concentration, requires a demonstrated reading proficiency in one of three languages: French, German, or Italian. Students may demonstrate proficiency by satisfactorily completing the Graduate School Foreign Language Test designed by the Educational Testing Service or by completing a departmental language translation exam. A thesis also is required for the degree.

The general requirements for the MM degree are summarized at the beginning of the School of Music section of the Graduate Catalog.

MM Theory—Composition Concentration

Admission to the Master of Music (MM) degree program, theory—composition concentration, requires a Bachelor of Music degree with a major in theory—composition or the demonstrated equivalent. Background deficiencies must be satisfied before students may enroll in graduate composition courses. Applicants also must submit representative compositions for examination by the composition faculty; approval for admission to candidacy is contingent upon the candidate’s demonstrated ability to complete a final project in composition.

Completion of the MM degree, theory—composition concentration, requires at least one semester of MUSC 840A–B, Seminar in the Techniques of Composition. In addition, students must complete a terminal project which must consist of one of the following: (1) a composition of major proportions, (2) a body of works in various media, or (3) a written thesis in the area of music theory. Composition majors may be required by the thesis committee to have a work or works performed publicly. The composition or compositions must be submitted in a minimum of two ink copies and bound in keeping with the procedures established through the Graduate School of Wichita State University. These ink copies represent a high quality of musical manuscript and must be completed in the candidate’s own hand.

The general requirements for the MM degree are summarized at the beginning of the School of Music section.

Courses for Graduate/Undergraduate Credit

MUSC 510. Interrelated Arts (3). Presents an aesthetic analysis of the fine arts: music, visual arts, drama, literature, and dance. Emphasizes style and commonality among the arts disciplines.

MUSC 523. Form and Analysis (2). Extensive analysis of the forms and formal processes of musical literature. Prerequisite: MUSC 228.

MUSC 531. Introduction to Electronic Music (2). Basic techniques of electronic music. Directed toward musicians who wish to use the electronic medium in teaching, performing, or communicating through music in any way.

MUSC 560. Applied Composition (2). Individual study in advanced musical composition emphasizing writing for small ensembles in the smaller forms. For theory—composition majors. Repeatable. Prerequisites: MUSC 260 and consent of theory-composition area faculty and coordinator, musicology-composition, to continue as a theory-composition major.

MUSC 561. 18th Century Counterpoint (2). Contrapuntal devices of the 18th century as found in the works of J.S. Bach. Prerequisite: MUSC 228.

MUSC 597–598. Organ Literature (1–1). Performance and discussion of works for the instrument of all periods; study of organ design and construction; and practice in aspects of service playing, such as hymn playing, modulation, accompanying, and improvising. Required of all organ majors. Repeatable. Prerequisite: MUSC 228 or departmental consent.

MUSC 616. Symphonic Literature (3). An advanced course in orchestral literature covering the development of the symphonic music from Baroque to the present day. Designed primarily for music majors who have already had MUSC 334 and 335.

MUSC 623. Opera Literature (3). A comprehensive survey of Italian, German, French, Russian, English, and American opera literature from the 17th century to the present. MUSC 113 is strongly recommended before taking the course. For upper-division or graduate students. Not limited to music majors.

MUSC 624. Oratorio and Cantata Literature (2). A study of the solo vocal literature of the larger sacred and secular forms from the 17th century to the present. Not limited to music majors.

MUSC 641. Orchestration (2). The study of instrumentation, emphasizing idiomatic scoring for various instrumental combinations with an approach to the problems of full orchestra and band scores. Prerequisite: MUSC 227.

MUSC 660. Applied Composition (2). Individual study in musical composition emphasizing writing for both small ensembles and large groups in the larger forms. Repeatable. Prerequisites: MUSC 560 and instructor's consent.

MUSC 661. 16th Century Counterpoint (2). Analysis and application of the contrapuntal composition techniques of the 16th century. Prerequisite: MUSC 228.

MUSC 671. Chromatic Harmony (2). Advanced study of chromatic harmonic materials of all periods with special attention to the 19th century. Emphasizes analysis and creative writing. Prerequisite: MUSC 228.
MUSC 672. Contemporary Techniques (2). Advanced study of music from impressionism to the present emphasizing related literature and creative writing. Prerequisite: MUSC 228.

MUSC 685. String Literature and Materials (2). A survey and stylistic analysis of music for solo strings and chamber combinations, beginning with the early Baroque period.

MUSC 726. Voice Literature (3). A comprehensive survey of early Italian arias, French chansons, German lieder, contemporary English songs, and Russian and Spanish literature.

MUSC 753. Choral Literature I (2). A historical and stylistic survey of choral literature of the Renaissance and Baroque eras.

MUSC 754. Choral Literature II (2). A historical and stylistic survey of choral literature of the Classical, Romantic, and Contemporary eras.


MUSC 790. Special Topics in Music (1–4). For individual or group instruction. Repeatable with departmental consent.

MUSC 791. Seminar in Music History (3). Develops areas of interest in music history as time permits. Makes no effort at a chronological survey. Includes ideas evolving the most interest and considered by the instructor to be of the greatest professional benefit when interest warrants.

Courses for Graduate Students Only

MUSC 830. Seminar in Music Theory (3). An analytical study of the materials used in musical composition from antiquity to the present, employing analytical approaches such as Schenker, Hindemith, and serial techniques. Develops analytical perspective rather than compositional skills.

MUSC 840A–B. Seminar in the Techniques of Composition (2). Examines the nature of compositional techniques through selected works in different media: (A) large ensembles and (B) small ensembles. Prerequisites: MUSC 671, 672, and 641, or departmental consent.

MUSC 841. Special Project in Music (1–3). Individual supervised study or research emphasizing the professional needs of the student. Repeatable for credit. Prerequisite: instructor's consent.

MUSC 852. Introduction to Bibliography and Research (3). Techniques of research and development of bibliography in music and music education. Course must be elected the first available semester of enrollment in MM or MME programs.

MUSC 860. Advanced Composition (2). Original work in the large forms and a continuation and expansion of MUSC 659–660. Prerequisite: MUSC 660 or equivalent.

MUSC 875. Thesis Research (2).

MUSC 876. Thesis (2).

MUSC 893. Music of Antiquity Through the Renaissance (3).

MUSC 894. Music of the Baroque Era (3).

MUSC 895. Music of the 18th Century (3).

MUSC 896. Music of the 19th Century (3).

MUSC 897. Music of the 20th Century (3).

School of Performing Arts

Linda Starkey, director

Dance (DANC)

While a formal major in dance at the graduate level is not offered, the following courses are available for graduate credit.

Courses for Graduate/Undergraduate Credit


DANC 505. Choreography 3 (3). Focuses on the choreographic process. Students create choreographic studies for more than one dancer using elements studied in Choreography I and II and exploring different choreographic approaches. Further exploration may include environmental, chance, and collaborative choreographies and multimedia approaches. Prerequisites: DANC 405. Corequisite: appropriate level modern dance or ballet technique class.


DANC 545. Methods of Teaching Dance (3). Develops teaching skills for elementary schools, high schools, recreation centers, private and professional schools, and universities through lesson planning and in-class teaching practice. Prerequisite: DANC 401 or 410.

DANC 580. Senior Project (1). Focuses on the process of choreographing and producing a dance concert for the completion of the dance major, under the supervision of a dance faculty mentor. A written paper and an oral review with the dance faculty support the concert. May be taken concurrently with DANC 505 with instructor's consent. Corequisites: appropriate level technique class, senior standing.

DANC 605. Choreography for the Musical Theatre (3). Introduces the process of choreography for the musical theatre from casting the chorus in a musical to staging a solo to choreographing an ensemble of 30 dancers/singers. Includes interpreting the score and script for dance, staging non-dancers, and other projects to develop the craft of choreography for the musical stage. Prerequisites: DANC 330 or instructor's consent.

DANC 690. Special Topics in Dance (1–6). For individual or group instruction. Repeatable for credit with departmental consent.

Theatre (THEA)

Graduate Faculty

Professor: Judith Babich, Betty Monroe

Associate Professor: Bret Jones

Assistant Professor: David Neville

While a formal major in theatre at the graduate level is not offered, the following courses are available for graduate credit.

Courses for Graduate/Undergraduate Credit

THEA 510. Design Project (1). Advanced work in the problems of stage lighting design, costume design, or scenic design. With the permission and supervision of the appropriate faculty member, the student designs for specific productions for either Mainstage or Experimental Theatre. Repeatable twice for credit if taken in different design areas. Prerequisite: instructor's consent.

THEA 516 & THEA 517. Playwriting I and II (3 & 3). Cross-listed as ENGL 517 and 518. The writing of scripts for performance. Emphasizes both verbal and visual aspects of playwriting. If possible, the scripts are given in-class readings by actors. Prerequisite: instructor's consent.

THEA 530. Musical Theatre Scene Study (2). An interdisciplinary practicum course with opportunities for student performers to refine interdisciplinary techniques by performing scenes from a variety of musical theatre genres, including opera, book musicals and rock musicals. Advanced students may explore opportunities to gain experience in directing and choreographing under faculty guidance and supervision. Prerequisites: junior or senior musical theatre, dance or voice majors only; and/or permission of the instructors.

THEA 544. Advanced Stagecraft (3). R; L arr. Explores advanced construction techniques for the fabrication of stage scenery and stage properties. Such operations may include welding, vacuum forming, carpentry, and working with a variety of new materials. Students complete a research project and presentation/demonstration of research findings. Independent projects relating to materials and techniques studied are pursued in arranged labs. Prerequisite: THEA 244.

THEA 546. Scene Painting (3). Presented with a lecture-demonstration-studio arrangement. Explores various theatre painting materials and techniques enabling the student to develop skill as a scenic artist. Prerequisite: THEA 244.

THEA 555. Senior Project (1). Cross-listed as MUSP 555. An interdisciplinary course to showcase the talents of graduating seniors to professional producers, agents, and casting directors. Students develop and produce a variety show demonstrating their talents in singing, dancing, acting, directing, and choreography. For majors only. Prerequisite: instructor's consent.

THEA 559. Directing II (3). R; L arr. Staging and rehearsal techniques emphasizing the problems of the period and stylized play. Prerequisites: THEA 359 or departmental consent and junior standing.

THEA 590. Theatre: Special Topics (2–3). Designed to expand and strengthen the experience of the student academically and professionally. Study of developments in theatre that go beyond, or are related to, courses already offered gives students a much richer preparation for their field of study. Topics include new technology, new materials, contemporary explorations in performance, and in-depth study of production methods.

Fine Arts
THEA 590E. Musical Theatre Performance (1). Cross-listed as DANC 320 and WSP 711U. See THEA 180E.

THEA 610. Directing the Musical (3). An interdisciplinary course using interdepartmental expertise (theatre, dance, music) to teach the student how to produce a musical. Prerequisite: instructor's consent.

THEA 620. Academic Theatre Practicum (2). The investigation and exploration of the theatrical act in the classroom situation within the university community. Reinforces researching, writing, directing, and performing skills. Enrolled students, functioning as a company, produce and perform for various disciplines on campus. Repeatable once for credit.

THEA 623. Development of the Theatre I (3). The history of theatrical activity as a social institution and an art form from its beginnings to the 17th century. Includes representative plays, methods of staging, and theatrical architecture of various periods.

THEA 624. Development of the Theatre II (3). History of theatrical activity as a social institution and an art form from the 17th century to the present. Includes representative plays, methods of staging, and theatrical architecture of various periods.

THEA 630. Musical Theatre & Opera Audition (3). Cross-listed as MUSP 790E. A practicum course which develops techniques and audition repertory singers need to gain professional employment and/or successfully compete for placement in advanced training programs. Also covers the business skills necessary to a professional career, and brings students into contact with professional guest artists who can provide additional insight and contacts. Prerequisite: instructor's consent.

THEA 643. Styles in Acting (3). Training in, and development of, the special techniques required for period or stylized plays with special emphasis on Greek, Shakespearian, and Restoration styles. Prerequisites: THEA 243, 342, and junior standing.

THEA 647. Scene Design II (3). Continuation of THEA 344 with more advanced work in designing settings for the stage and including studies in scenographic techniques and exercises in model building. Students design settings for a production having a single set, a production requiring a simultaneous setting, and a production using multiple settings. Requires no laboratory work in theatre production. Prerequisites: THEA 244 and 344.

THEA 649. Stage Lighting II and Theatre Sound (3). Continues the study and application of the theories and techniques of THEA 345, emphasizing advanced concepts of design, and provides an introduction to theatre sound production. Prerequisite: THEA 345.

THEA 651. Scene Study (3). The synthesis of all previous acting courses. Studies scenes in depth as preparation for performance. Course goal is the presentation of fully realized characterizations in those scenes studied, integrating the elements of the actor's craft learned in the prerequisite courses. Prerequisites: THEA 643 and junior standing.

THEA 653. History of Costume (3). R; L arr. Historical survey and individual research of dress from ancient Egypt to present day emphasizing social, political, economic, and religious influences. Theory and practice of adapting period styles to the stage. Prerequisite: THEA 253 or departmental consent.

THEA 657. Costume Design I (3). Covers the techniques of costume design for the stage. Students strengthen and expand their knowledge of techniques in costume design for the stage, film, and television. Prerequisites: ARTF 145, THEA 253.

THEA 675. Directed Study (2–4). Cross-listed as COMM 675. Individual study or projects. Repeatable for credit with departmental consent. Prerequisite: departmental consent.

THEA 728. Playscript Analysis (3). Develops students' abilities to analyze playscripts from the point of view of those who face the task of staging them. Focuses on studying and testing practical methods of analysis developed by outstanding theatre directors, teachers, and critics. Collective analysis and individual projects are part of the coursework. Prerequisite: THEA 623 or 624.

THEA 780. Theatre Internship (3–15). Advanced theatre production work as arranged by students in directing, acting, scenery, and lighting; costume design and construction; or theatre management with a professional theatre company. Work is evaluated by graduate faculty. Total of internship activity applicable toward graduation is 15 hours. Prerequisite: junior standing or departmental consent.

Courses for Graduate Students Only

THEA 820. Investigation and Conference (2–3). Cross-listed as COMM 820. Directed research and experimentation for graduate students in some phase of (a) public address, (b) theatre history and production, (c) radio-television, or (d) the teaching of speech. Repeatable for credit up to a total of 6 hours.

THEA 823. History of Dramatic Criticism (3). A survey and analysis of major critical theories from Aristotle to the present.

THEA 824. Development of Modern Theatre Styles (3). An examination of the major movements in the modern theatre since 1870. Emphasizes both literary and physical elements of styles.

The following abbreviations are used in the course descriptions: R stands for lecture and L for laboratory. For example, 4R; 2L means 4 hours of lecture and 2 hours of lab.
College of Health Professions

Offices: 400 Ahlberg Hall
Peter A. Cohen, dean
Mary Koehn, associate dean & chair, School of Nursing
Charles R. Fox, associate dean
Linda B. Black, assistant dean

Departments:
Communication Sciences and Disorders, (316) 978-3240—Kathy Coefal, chairperson
Dental Hygiene, (316) 978-3614—Denise Maseman, chairperson
Medical Technology, (316) 978-3146—Jean Brickell, chairperson
Physical Therapy, (316) 978-3604—Camilla Wilson, chairperson
Physician Assistant, (316) 978-3011—Sue Nyberg, chairperson
Public Health Sciences, (316) 978-3060—Richard Muma, chairperson
School of Nursing, (316) 978-3610—Mary Koehn, chairperson

The College of Health Professions offers graduate programs leading to a Master of Science in nursing, Master of Physician Assistant, Master of Arts in communication sciences and disorders, Doctor of Audiology, doctorate in communication sciences and disorders, Doctor of Physical Therapy, and Doctor of Nursing Practice. Admission to these programs requires a bachelor's degree and the fulfillment of requirements listed for each program elsewhere in the Graduate Catalog.

Certificates: The College of Health Professions offers the following graduate certificates: certificate in public health; post master’s graduate certificate options in nursing include acute care nurse practitioner, adult clinical nurse specialist, family nurse practitioner*, nursing and health care systems administration, pediatric clinical nurse specialist, pediatric nurse practitioner, and psychiatric-mental health nurse practitioner.

*Contact the School of Nursing graduate program office for the most recent information on this specialization.

Licensing
Many state and national licensing and governing organizations will not grant a license, certification, registration, or other similar document to practice one's chosen profession if one has been convicted of a felony, and in some cases a misdemeanor. Prospective applicants are encouraged to consult with one’s chosen professional governing or licensing organization for more detailed information before applying.

Clinical Learning
As noted above, learning in clinical settings is an important aspect of programs of study in the College of Health Professions. Many health care facilities require information on students engaged in clinical learning opportunities, including, but not limited to: verification of name, address and social security number; personal health information; drug and alcohol testing; criminal background checks; verification of education; listing on any registered sex offender list; listing on the U.S. Office of Inspector General’s Excluded Individual’s list; and listing on the U.S. General Services Administration’s Excluded Parties List. While the College of Health Professions will assist students in obtaining and gathering the information required by a health care facility, the cost of obtaining such information must be assumed by the student. What information will be required to permit the student to participate in a clinical setting learning experience will depend upon the respective health care facility. If a student is unable to fulfill the clinical experiences required by their program of study, the student may be unable to matriculate and/or graduate.

Essential Functions/Technical Standards
Essential functions/technical standards define the attributes that are considered necessary for students to possess in order to complete their education and training, and subsequently enter clinical practice. These essential functions/technical standards are determined to be prerequisites for entrance to, continuation in, and graduation from a student’s chosen discipline in the WSU College of Health Professions.

Students must possess aptitude, ability, and skills in five areas: observation; communication; sensory and motor coordination and function; conceptualization, integration, and quantification; and behavioral and social skills, ability, and aptitude. The essential functions/technical standards described by a student’s chosen discipline are critically important to the student and must be autonomously performed by the student. It should be understood that these are essential function/technical standards for minimum competence in a student’s discipline. Contact specific programs for detailed essential functions/technical standards. Reasonable accommodation of disability will be provided after the student notifies the department of the disability, and the disability has been documented by appropriate professionals.

School of Health Sciences
The School of Health Sciences offers graduate programs leading to the Master of Physician Assistant, Master of Arts in communication sciences and disorders, Doctor of Audiology, doctorate in communication sciences and disorders and Doctor of Physical Therapy degrees. Specific requirements for each degree are described under the appropriate listing as follows.

Basic Health Sciences (HS)

Courses for Graduate/Undergraduate Credit

HS 631. Normal and Clinical Nutrition (4). Studies human nutritional needs in normal development and the life cycles. Covers composition, classification and function of foods and nutrients, food handling and public health safety and laws, and nutrition in special situations. Includes a study of principles of nutritional support and diet as therapy. Addresses the dietary concerns of a variety of clinical disorders, including gastrointestinal disorders, diabetes mellitus, cancer, burns, liver disease, obesity and weight loss, eating disorders, HIV infections, kidney
and cardiovascular disease, parenteral and enteral nutrition, and surgical conditions. Studies nutritional assessment, data interpretation, care planning, record keeping, and client communications. Prerequisites: general chemistry, anatomy, and physiology.


HS 710. Applied Clinical Pharmacology (3). Discusses clinical applications of selected drug classes commonly prescribed in the primary care setting as well as the follow-up management of common chronic diseases. Discusses pharmacological management as to pharmacokinetics, dosages, mechanisms of action (at molecular and systemic levels), side effects, drug interactions, contraindications, therapeutic use, and expected outcomes. Emphasizes the practical application of this knowledge in various patient populations of all ages as well as rational drug selection and monitoring. Methodology includes lecture presentations, group discussions, clinical case studies, assessment of recent literature, homework assignments, quizzes, and exams. Prerequisite: HS 301 admission to graduate health professional program or PA professional program, or instructor's consent.

HS 711. Pharmacological Management of Acute and Chronic Diseases (3). Discusses the clinical application of specific categories of drugs used in the treatment of several common acute and chronic diseases. Presents pharmacokinetics, mechanisms of action, dosages, side effects, and monitoring parameters of medications as they are used in these diseases and in various patient populations. Facilitates clinical application of this knowledge through case studies, class discussions, and reviews of the latest medical literature. Prerequisites: admission to graduate nursing program and department consent or completion of HS 710 and admission to PA professional program.

HS 720. Neuroscience (3). 3R; 2L. Integration of neuroanatomy and neurophysiology of the central and peripheral nervous systems with human functional abilities. Prerequisite: HS 700 or program consent.

Health Professions—General (HP)

Courses for Graduate/Undergraduate Credit

HP 570. Selected Topics (1–4). Lecture/discussion; focuses on a discrete area content relevant to the health disciplines. In-depth study of a particular topic or concept, including didactic and current research findings and technological advances relevant to the topic. Repeatable to a maximum of 6 credit hours with program consent, upper-division status.

HP 750. Workshop in Health Professions (1–4). An opportunity for intensive study of special topics related to health profession practice, education, or research.

Communication Sciences and Disorders (CSD)

Graduate Faculty

Professor: Kathy Coufal (chairperson), Barbara W. Hodson, Raymond H. Hull, Rosalind R. Scudder

Associate Professor: Anthony DiLollo, Lyn R. Goldberg, Julie W. Scherz, Kathy Stratman

Assistant Professor: David Downs, Antje S. Mefferd, Douglas F. Parham, Trisha Self, Xiao-Ming Sun

Clinical Services

Clinical services for members of the community with speech, language, or hearing disorders, as well as students enrolled at Wichita State, may be arranged with the Evelyn Hendren Cassat Speech-Language-Hearing Clinic. Fees are charged for these services.

Degrees and Areas of Specialization

The Department of Communication Sciences and Disorders offers courses of study leading to the Master of Arts (MA), the Doctor of Audiology (AuD), and the Doctor of Philosophy (PhD). Academic and clinical education are provided for students who wish to become professionally qualified to work with children and adults. Instructional areas include communication sciences, speech-language pathology, and clinical and rehabilitative audiology. A graduate program culminating in a master's degree is required for professional certification as a speech-language pathologist for work in the public schools, hospitals, clinics, rehabilitation centers, or private practice. A professional doctoral degree is required to practice as an audiologist. With an undergraduate preprofessional major, students typically can complete the master's program in two years and the AuD in four years (including summers). The MA and AuD programs at WSU satisfy the minimum requirement for professional certification by the American Speech-Language-Hearing Association (ASHA) and for Kansas licensure, and are accredited by the Council on Academic Accreditation (CAA) of ASHA. The PhD program prepares individuals to function professionally as independent clinicians, as teacher-scholars in an academic setting, or as program administrators.

Admission Requirements

1. Admission to the Graduate School at Wichita State University;
2. Minimum grade requirements: 2.750 overall GPA and 3.000 (MA & AuD)/3.500 (PhD) GPA in the last 60 semester credit hours;
3. Three letters of recommendation (department form required for admission option #3 below);
4. One-page personal essay in which applicants describe the contributions they would make to the field. PhD applicants are also required to include a professional resume;
5. Official scores for the general test of the Graduate Record Examination (GRE) taken within the last five years. For PhD applicants, a minimum composite score of 1000 (verbal + quantitative) and 3.5 (analytical writing) is required;
6. Non-native English speaking students, international and domestic, must submit a TOEFL score of 550 paper-based, 213 computer-based, or 79 Internet-based, and a test of spoken English (TSE) score of 50 to be considered for admission to the MA or AuD programs (no waivers allowed); and
7. An acceptance fee of $50 for MA and AuD/$100 for PhD (pending approval).

To be reviewed for admission, applicants should do the following:
1. Submit an application for admission and supporting transcripts to the WSU Graduate School; and either
2. Submit an application and supporting documents to the communication sciences and disorders centralized admission service (CSDCAS) by the published deadline (MA and AuD only); or
3. Submit supporting documents directly to the WSU CSD department by the published deadline. Students who are applying only to WSU or for the PhD program should complete #1 and #3. Admission to the MA and AuD programs is considered for students who have completed an undergraduate major of at least 30 credit hours in the area of speech, language, and hearing disorders. Selected undergraduate or closely allied courses may be considered. Additionally, students with a degree from another field will be considered for admission after completion of prerequisite courses (11 credit hours for AuD; 41 credit hours for MA) in this field. Some prerequisite courses may be completed during the graduate program under special circumstances. Please consult a CSD adviser. Admission is for fall semester only. The deadline for applications is February 1.

Admission to the CSD PhD program is restricted to those students whose abilities, experience, and previous coursework indicate that they are likely to be able to complete the doctoral program successfully. It is expected that the
applicant will have acquired sufficient knowledge in communication sciences and disorders to be prepared for entry into an integrated program of advanced study and research. Applications are reviewed on a continuing basis.

**Master of Arts Requirements**

The Master of Arts (MA) in communication sciences and disorders may be earned with an emphasis in speech-language pathology. This program requires students to complete 37 hours of didactic coursework, 28 clinical practicum hours, and 3 non-thesis option, or 4 thesis option, credit hours, totaling 68 or 69 credit hours. A plan of study must be filed with the Graduate School after completion of 12 hours of graduate work. Students should work closely with CSD academic advisers to ensure proper course selection and clinical experiences for certification and degree.

Successful completion of the program requires the following: 1) satisfactory performance on all didactic and clinical evaluative measures as determined by program faculty, clinical educators, and externship supervisors with at least a 3.000 GPA; and 2) satisfactory performance in completing the mentored research project with subsequent presentation and evaluation, as reviewed by program faculty. All students are required to take the Praxis exam prior to graduation.

**Didactic Coursework**

CSD 705 Counseling in Communication Disorders .......................... 3  
CSD 710 Autism Spectrum Disorders .......................... 3  
CSD 800 Research Methods .......................... 3  
CSD 809 Language & Literacy for Young Children: Assessment and Intervention .......................... 3  
CSD 810 Motor Speech Disorders .......................... 2  
CSD 811 Dysphagia .......................... 3  
CSD 812 Aphasia, Right Hemisphere Disorders and Dementia .......................... 3  
CSD 814 Applied Phonology .......................... 3  
CSD 815 Augmentative and Alternative Communication .......................... 3  
CSD 816 Language & Literacy for School-Aged and Adolescents .......................... 3  
CSD 817 Voice Disorders .......................... 3  
CSD 818 Fluency Disorders .......................... 3  
CSD 819 Traumatic Brain Injury .......................... 2  
CSD 821 Educational Settings .......................... 6  
CSD 822 Medical Settings .......................... 6  
CSD 822, 824, or 830 .......................... 14  
CSD 899 Thesis .......................... 2

**Clinical Practicum**

CSD 655 Auditory Assessment—SLP .......................... 2  
CSD 821 Educational Settings .......................... 6  
CSD 823 Medical Settings .......................... 6

Further, students must enroll in a clinical practicum course (CSD 820, 821, 822, 823, 824, or 830) every semester during the master's program to complete the necessary clinical hours for graduation via supervised practica at the WSU Speech-Language-Hearing Clinic, hospital, school, or other practice environment. To ensure that the placement will provide candidates the best clinical opportunities, the placement of the candidate may or may not be in the metropolitan area of Wichita. Although WSU has a number of sites established, the candidate may also independently seek placement for that experience. However, the final decision as to the suitability and location will be approved by the program faculty. A competency-based evaluation of the student's performance will be made at regular intervals throughout the clinical experience. Before graduation, students must have achieved sufficient clinical clock hours to satisfy requirements of the American Speech-Language-Hearing Association (ASHA) for the Certificate of Clinical Competence (CCC-SLP) and must have demonstrated clinical competency in completing those hours as determined by both in-house and external clinical supervisors.

Students enrolled in the department's clinical practicum courses are required to provide proof of medical clearance (see department for details) and purchase professional liability insurance coverage (not less than $1 million per single claim/$3 million aggregate per year) at the Speech-Language-Hearing Clinic prior to the start of the course. These requirements must be renewed annually. Semester clinic fees will also apply. Students are required to obtain a criminal background check at their own expense as part of the clinical placements. Students should consult the College of Health Professions section of the Catalog for additional requirements which may be needed to participate in clinical settings. In addition, applications for external practicum placements must be made one year in advance and are subject to departmental approval.

**Doctor of Audiology Requirements**

The Doctor of Audiology (AuD) program requires a minimum of 106 credit hours of didactic and clinical courses. In addition, 3 hours of tool subjects in sign language are required. A plan of study must be completed within the first year of the program and two-thirds of the hours must be at the 800 level or above. All students must enroll in a clinical practicum course each semester of enrollment, except during the first year of the program when enrollment in practicum is required only in the spring semester.

**Didactic Coursework**

CSD 705 Counseling in Communication Disorders .......................... 3  
CSD 706 Acoustic & Perceptual Phonetics .......................... 3  
CSD 800 Research Methods .......................... 3  
CSD 802 Anatomy and Physiology of the Auditory System .......................... 2  
CSD 803 Introduction to Psychoacoustics .......................... 3  
CSD 804 Clinical Audiology I .......................... 4  
CSD 805 Clinical Audiology II .......................... 3  
CSD 806 Advanced Anatomy and Physiology of the Auditory System and Genetics .......................... 3  
CSD 807 Acoustics and Instrumentation .......................... 3  
CSD 808 Otocoustic Emissions .......................... 2  
CSD 851 Medical Audiology .......................... 2  
CSD 854 Hearing Conservation .......................... 2  
CSD 855 Pediatric and Educational Audiology .......................... 3  
CSD 860 Introduction to Amplification .......................... 3  
CSD 861 Adv. Topics in Amplification .......................... 3  
CSD 862 Pediatric Amplification .......................... 2  
CSD 863 Professional Seminar in Audiology .......................... 3  
CSD 866 Auditory Evoked Potentials .......................... 3  
CSD 868 Diagnosis and Management of Balance Disorders .......................... 3  
CSD 891 Non-Thesis Research .......................... 2  
CSD 892 Presentation of Research .......................... 1  
CSD 897 Residency .......................... 18

Advancement to candidacy is contingent upon 1) satisfactory performance on didactic and clinical evaluative measures throughout years one through three of the student’s AuD program as determined by program faculty, clinical educators and external supervisors, with a 3,000 GPA or better, and 2) successful completion of the third-year mentored research project with satisfactory performance on the subsequent oral presentation and evaluation as determined by faculty. Advancement to candidacy allows students to enroll in the final program requirement, the full-time residency.
Further, students must enroll in CSD 997, Audiology Residency, in consecutive semesters during the final year of the program of study to complete the necessary clinical hours for graduation. The residency involves a full-time supervised experience in a hospital, clinical, or other audiology practice environment. To ensure that the placement will provide candidates the best environment for that culminating experience, the placement of the candidate may or may not be in the metropolitan area of Wichita. Although WSU has a number of sites established for the residency year, the candidate may independently seek placement for that experience. However, the final decision as to the suitability and location will be approved by the program faculty. A competency-based evaluation of the students’ performance will be made at regular intervals throughout the clinical experience. Before graduation, students must have achieved sufficient clinical clock hours to satisfy the requirements of the American Speech-Language-Hearing Association (ASHA) for the Certificate of Clinical Competence (CCC-A) and must have demonstrated clinical competency in completing those hours as determined by both in-house and external clinical supervisors.

Students enrolled in the department’s clinical practicum courses are required to provide proof of medical clearance (see department for details) and purchase professional liability insurance coverage (not less than $1 million per single claim/$3 million aggregate per year) at the Speech-Language-Hearing Clinic prior to the start of the course. These requirements must be renewed annually. Semester clinic fees will also apply. Students are required to obtain a criminal background check at their own expense as part of the clinical placements. Students should consult the beginning of the College of Health Professions chapter of the Catalog for additional requirements which may be needed to participate in clinical settings. In addition, applications for external practicum placements must be made one year in advance and are subject to departmental approval.

**Doctor of Philosophy Requirements**

The doctoral program in communication sciences and disorders requires a minimum of 65 hours beyond the master’s degree, or 95 hours beyond the bachelor’s degree, on the plan of study (including a maximum of 18 hours of dissertation). In addition, 12 hours of research tool courses are required. A doctoral student becomes a candidate for the degree after passing the qualifying examination, which typically is taken during the semester the plan of study requirements are completed (exclusive of dissertation hours). Doctoral candidates enroll in at least 2 dissertation hours each semester (including the semester of graduation). The final requirements for the PhD are the completion of original research, the dissertation, and an oral defense.

**Courses for Graduate/Undergraduate Credit**


CSD 515. Speech-Sound Disorders Lab (1). Laboratory experience compliments the topics covered in CSD 514 and includes classroom and clinic observations. Prerequisites: CSD 306, 306L. Corequisite: CSD 514.

CSD 517. Communication in Aging (3). Focuses on how communication is affected by aging, what communication problems may be experienced by older persons, and what the implications are for speech-language pathologists and audiologists providing services to older persons. Explores prevention activities geared toward maintaining functional communication abilities in older adults as well as functional treatment approaches geared toward the specific communication needs of older persons. Course is appropriate for students in other fields of study.

CSD 518. Deaf Culture (3). Examines various cultural aspects of the deaf community. Presents the interrelationship of language and culture along with a study of socialization, norms, and values.


CSD 520. ASL: Nonverbal Communication (3). Nonverbal way of communication which forms an integral base for communication in American Sign Language. Emphasizes the use and understanding of facial expression gestures, pantomime and body language. Role play and acting out are required as part of this class. Prerequisite: CSD 370 or instructor's consent.

CSD 521. Genetic and Organic Syndromes Lab (1). Laboratory experience which provides students the opportunity to observe and document assessment and treatment of individuals with various communication disorders caused by syndromic and/or gene-linked conditions. Prerequisites: CSD 301, 302. Corequisite: CSD 519.

CSD 522. Deaf Heritage (2). Considers the history, nature, and uses of language and its effect upon human thought and action. Also covers the ideas and ideals expressed by deaf people over many periods of time through drama, philosophy, painting, and related areas.


CSD 605. Neuroscience of Speech and Language: Basic Processes (4). A consideration of basic neuromotor and neurophysiology necessary for obtaining an understanding of the representation of speech and language in the human central nervous system and of conditions resulting from neurological impairment. Prerequisite: senior standing.

CSD 655. Graduate Methods and Practicum in Auditory Assessment—SLP (2). Methods in audiological evaluation for speech and language pathology students. Discusses the proper hearing screening techniques for all age groups during a three-day pre-session seminar and practical experience throughout the semester. Addresses basic hearing aid maintenance and fitting, counseling, newborn hearing screening and intervention/prevention. Speech-language pathology students engage in practicum experiences in audiological screening and assessment as arranged. Prerequisites: CSD 351, and departmental approval.

CSD 705. Counseling in Communication Disorders (3). Provides information on the structure and conduct of interviews, basic counseling strategies, and consideration of the “helping” role as practiced by communication disorders professionals. Focuses on information supportive of developing effectiveness in these roles. Considers multicultural concerns.

CSD 706. Acoustic and Perceptual Phonetics (3). Study of the physical patterns (acoustic) of speech sounds and the importance of these acoustic patterns to speech recognition (perception). Focuses on segmental phonemes (vowels and consonants) and on suprasegmental characteristics such as stress and intonation. Introduces different types of speech analysis techniques and discusses how they may be used to study the acoustic patterns of speech sounds. Studies how different aspects of the speech signal relate to listener perception. Prerequisites: CSD 210, 301, and 302.

CSD 710. Autism Spectrum Disorders (2–3). An overview of the characteristics and etiology of autism spectrum disorders and the knowledge needed to conduct effective communication and language assessments and develop evidence-based treatment strategies for individuals with ASD. Covers guidelines for the assessment and intervention of communication skills, including decision making for the selection of functional communication systems, structured teaching, and positive environmental supports for effective learning.

CSD 740. Selected Topics in Communication Sciences and Disorders (1–3). Individual or group study in specialized areas of communication sciences and disorders. Repeatable for credit to a maximum of 6 hours. Prerequisite: instructor's consent.

CSD 750. Workshop in Communication Sciences and Disorders (1–4). Individual or group study in specialized areas of communication sciences and disorders. Repeatable for credit to a maximum of 8 hours.

CSD 764. Aural Rehabilitation (3). Discussion and labs concerning the role of speech-language pathologists and audiologists in evaluation and treatment of hearing-impaired children, adolescents, and adults and their families. Students focus on understanding psychological, social, educational, and occupational impacts of hearing.
loss; and on applying a rehabilitative model, technology, individual and group therapies, and collaboration with families and professionals to help hearing-impaired persons improve or cope better with their communication problems. Prerequisite: CSD 351 or instructor’s consent.

CSD 781. Cooperative Education (1–3). A work-related placement that integrates theory with a planned and supervised professional experience designed to complement and enhance the student’s academic program. May not be used toward degree requirements. Repeatable for credit. Offered C/NC.

Courses for Graduate Students Only

CSD 800. Research Methods (3). A survey of different research methods used in the fields of communication sciences and communication pathology. Students acquire the fundamental motivation, knowledge, and skills for conducting clinical and basic science research and for reading and critically evaluating the clinical research literature.

CSD 802. Anatomy & Physiology of the Auditory System (2). Examines in detail anatomy and function of the auditory system in light of current research knowledge. Studies the normal system as a basis for understanding the pathological system. Prerequisite: CSD 251.

CSD 803. Introduction to Psychoacoustics (3). Basic principles underlying the perceptual hearing process, emphasizing the interdependencies between sound stimuli and subjective auditory experience as related to communication behavior. Prerequisite: CSD 802.

CSD 804. Clinical Audiology I (4). Discussion and labs concerning preparation, administration, interpretation, and reporting of basic hearing test battery. Students focus on basic interviewing, pure tone air-conduction and bone-conduction testing, speech audiometry, clinical masking, basic immittance audiometry, and written and verbal reporting of audiometric results. Prerequisite: CSD 351 or instructor’s consent.

CSD 805. Clinical Audiology II (3). Discussion and labs concerning preparation, administration, interpretation, and reporting of auditory site-of-lesion test battery. Students focus on diagnostic interviewing; advanced immittance audiometry; audiologic diagnostic evaluation of peripheral and central auditory disorders, non-organicity, and tinnitus; interpreting test battery results using principles of epidemiology and clinical decisions analysis; and written and verbal reporting of audiometric results. Prerequisite: CSD 804.

CSD 806. Advanced Anatomy and Physiology of the Auditory System and Human Genetics (3). An in-depth study of the conductive and sensory (cochlear) mechanisms and anatomy and physiology of the auditory nervous system, including the auditory afferent and efferent systems. Introduces general information on embryologic development of the outer, middle and inner ears and the auditory nervous system. Addresses fundamental knowledge on human genetics such as DNA structure and function, genes, modes of genetic transmission, and hereditary deafness. Discusses application of genetic testing and prenatal diagnosis of genetic disorders. Prerequisite: CSD 802 or instructor’s consent.

CSD 807. Acoustics and Instrumentation (3). Study of basic acoustics for the hearing and speech sciences, including physical and mathematical concepts in sound generation, transmission, manipulation, measurement, and wave analysis. Introduces the fundamentals of electronics in hearing sciences and clinical application in audiology, including essential concepts and function of circuits and electronic and technical knowledge of major forms of instrumentation.

CSD 808. Otoacoustic Emissions (2). Study of theoretical consideration of otoacoustic emissions in evaluating cochlear function and clinical applications of different types of measures, including instrumentation, stimulus, and acquisition parameters; effects of intrinsic and extrinsic variables, and interpretation of test results. Prerequisites: CSD 802 and 807.

CSD 809. Language & Literacy for Young Children: Assessment and Intervention (3). Provides current evidence relevant to language assessment and intervention strategies for children birth to school-age. Includes examination and development of culturally sensitive individual and family service plans, facilitation of emergent literacy, and problem-based application of descriptive developmental treatment model. Observation of clinical intervention is required. Prerequisite: previous coursework in typical language development.


CSD 811. Dysphagia (3). Covers the disorder of dysphagia as it affects persons of all ages. Addresses normal swallowing in infants, children, and adults. Covers the etiologies which cause dysphagia as well as assessment procedures appropriate for various ages. Examines treatment procedures. Covers the importance of team interventions for dysphagia assessment and treatment. Addresses ethical and funding issues. Prerequisite: CSD 605.

CSD 812. Aphasia, Right Hemisphere Disorders and Dementia (3). Covers the communication disorders (speech and language) resulting from neuropsychopathologies such as stroke or dementia. Identifies medical etiologies and risk factors. Addresses assessment and treatment procedures. Prerequisite: CSD 605 or instructor’s consent.


CSD 815. Augmentative and Alternative Communication (3). Overview of augmentative and alternative communication systems and strategies for individuals with special needs across the life span (e.g., cerebral palsy, autism, degenerative neurological disease). Includes an exploration of high tech and low tech devices and strategies as well as adaptations for assessment of individuals who are non-speaking.

CSD 816. Language and Literacy for School-Age and Adolescents (3). Examination of various approaches to working with children and adolescents with language and literacy deficits which compromise school success. Explores the multidimensional nature language and literacy needs of students in the classroom to meet state guidelines. Includes multicultural aspects and collaboration strategies.


CSD 818. Fluency Disorders (3). Reviews current theories on the etiology and development of the disorder. Considers behaviorally based diagnostic procedures for children and adults, as well as methods for clinical intervention, including procedures for parent interviewing and counseling, and multicultural concerns. Provides opportunities for observation, one focus being demonstration of intervention methods.


CSD 821. Educational Settings Practicum (6). Provides supervised clinical experiences in identification, diagnosis, evaluation, treatment, referral and counseling of children with speech or language impairments in a school setting. Demonstration of applied clinical skills in the elementary and/or secondary school levels is completed. Prerequisites: CSD 809, 816, 822, medical clearance, liability insurance, and departmental approval one year prior to enrollment.

CSD 822. General Clinical Practicum (2 or 4). Provides supervised clinical experiences in settings with preschoolers, school-aged children, and adults with a wide variety of communication disorders. Covers concepts such as clinical practice, including diagnosis, data collection, report writing, and treatment techniques. Students will be required to attend colloquium meetings as scheduled by the department. Repeatable for credit Prerequisites: medical clearance and liability insurance.

CSD 823. Medical Settings Practicum (6). Provides supervised clinical experiences in individual and group therapy diagnostics, documentation, consultations and interdisciplinary staffings in a medical setting. Prerequisites: CSD 810, 811, 812, 822, medical clearance, liability insurance, and departmental approval one year prior to enrollment.

CSD 824. External Placement Practicum (2 or 4). Supervised clinical experiences in off-site locations for advanced clinical experiences in a variety of settings as well as a wide spectrum of speech and language disorders. Repeatable for credit. Prerequisites: CSD 822, medical clearance, liability insurance, and departmental approval one year prior to enrollment.
CSD 830. Kaleidoscope Preschool Practicum (4). Techniques and methods for development of clinical skills in a supervised early childhood interdisciplinary preschool practicum setting. Primary focus on preschool children with language disorders. Development of a philosophy of clinical processes includes procedures for group and classroom therapy, writing behavior objectives and progress, and conduct of client conferences. Prerequisites: CSD 822, medical clearance, liability insurance, and departmental consent one year prior to enrollment.

CSD 835. Early Practicum Experience in Audiology (3). Guided observations of a variety of audiological activities as well as an aide in diagnostic evaluations. Students observe preparations for administration of and follow-up to clinical evaluations. Hands-on experience is gained through simulated audiological evaluations and other clinical assignments. Clinical report writing is also introduced. Prerequisite: departmental approval.

CSD 851. Medical Audiology (2). Many hearing disorders require evaluation/treatment by both the audiological and medical professions. Reviews the audiological and physiological/medical aspects of the more common of these conditions found in children and adults. Prerequisites: CSD 251 and 802.

CSD 854. Hearing Conservation (2). Discussion and labs concerning prevention of hearing loss in the workplace, military, community, and recreation. Students focus on risk factors of major preventable hearing impairments including noise, chemicals ototoxicity, substance abuse, STD's, and prenatal care; measurement, calculation, and reporting of noise levels; application of epidemiological principles, forensic audiology, and government regulations; and implementing prevention programs through noise control, hearing testing, hearing protection devices, and worker and public education.

CSD 855. Pediatric and Educational Audiology (3). Discussion and labs concerning identification, evaluation, and intervention with infants, children, and adolescents with hearing losses, other auditory problems, or developmental disabilities. Students focus on newborn hearing screening programs; auditory and global development of children and their importance in behavioral, functional, and across the life span. Lab component provides opportunities for hands-on learning and independently performing various audiological procedures. Prerequisites: CSD 802, 804, and 806.

CSD 868. Diagnosis and Management of Persons with Balance Disorders (3). Discussion and labs concerning an audiologist's role in diagnosis and management of persons with vestibular and balance disorders. Students focus on anatomy, physiology, development and disorders of vestibular and ocular-motor systems; subjective evaluations using interview and clinical testing; have testing for balance impairments; balance rehabilitation; and interdisciplinary collaboration and communication. Prerequisite: CSD 806 or instructor's consent.

CSD 866. Auditory Evoked Potentials (3). Provides information on the anatomic and physiologic basis of auditory-evoked potentials generated from the peripheral and central auditory systems. Topics for techniques for the administration and interpretation of auditory-evoked potentials, including cochlear potentials (EOCG), the auditory brainstem responses (ABBR), and the late-evoked potentials (MLR, ALSEP, MMN, and P300). The use of evoked potentials in intraoperative monitoring is also discussed. Lab component provides opportunities for hands-on learning and independently performing various auditory-evoked potential tests. Prerequisites: CSD 802, 804, and 806.

CSD 850. Kaleidoscope Preschool Practicum (4). Techniques and methods for development of clinical skills in a supervised early childhood interdisciplinary preschool practicum setting. Primary focus on preschool children with language disorders. Development of a philosophy of clinical processes includes procedures for group and classroom therapy, writing behavior objectives and progress, and conduct of client conferences. Prerequisites: CSD 822, medical clearance, liability insurance, and departmental consent one year prior to enrollment.

CSD 851. Medical Audiology (2). Many hearing disorders require evaluation/treatment by both the audiological and medical professions. Reviews the audiological and physiological/medical aspects of the more common of these conditions found in children and adults. Prerequisites: CSD 251 and 802.

CSD 854. Hearing Conservation (2). Discussion and labs concerning prevention of hearing loss in the workplace, military, community, and recreation. Students focus on risk factors of major preventable hearing impairments including noise, chemicals ototoxicity, substance abuse, STD's, and prenatal care; measurement, calculation, and reporting of noise levels; application of epidemiological principles, forensic audiology, and government regulations; and implementing prevention programs through noise control, hearing testing, hearing protection devices, and worker and public education.

CSD 855. Pediatric and Educational Audiology (3). Discussion and labs concerning identification, evaluation, and intervention with infants, children, and adolescents with hearing losses, other auditory problems, or developmental disabilities. Students focus on newborn hearing screening programs; auditory and global development of children and their importance in behavioral, functional, and across the life span. Lab component provides opportunities for hands-on learning and independently performing various audiological procedures. Prerequisites: CSD 802, 804, and 806.

CSD 868. Diagnosis and Management of Persons with Balance Disorders (3). Discussion and labs concerning an audiologist's role in diagnosis and management of persons with vestibular and balance disorders. Students focus on anatomy, physiology, development and disorders of vestibular and ocular-motor systems; subjective evaluations using interview and clinical testing; have testing for balance impairments; balance rehabilitation; and interdisciplinary collaboration and communication. Prerequisite: CSD 806 or instructor's consent.

CSD 866. Auditory Evoked Potentials (3). Provides information on the anatomic and physiologic basis of auditory-evoked potentials generated from the peripheral and central auditory systems. Topics for techniques for the administration and interpretation of auditory-evoked potentials, including cochlear potentials (EOCG), the auditory brainstem responses (ABBR), and the late-evoked potentials (MLR, ALSEP, MMN, and P300). The use of evoked potentials in intraoperative monitoring is also discussed. Lab component provides opportunities for hands-on learning and independently performing various auditory-evoked potential tests. Prerequisites: CSD 802, 804, and 806.

CSD 999. Doctoral Dissertation (1–18). A directed research project for doctoral students culminating in a manuscript appropriate for publication. Prerequisite: doctoral student standing.

CSD 996. University Teaching (1). A weekly seminar on university teaching. The pedagogies, theories, and research of teaching are discussed through presentation of ongoing or planned research by the CSD faculty and doctoral graduate students. Goal is to provide CSD doctoral students with new and valuable knowledge and insights regarding how real-world research is performed. Prerequisite: doctoral student standing.

CSD 997. Audiology Residency (6). Full-time supervised clinical experience at an approved clinical facility. Repeatable. Prerequisites: advancement to candidacy in the AuD program.


Medical Technology (MEDT)

Courses for Graduate Students Only

MEDT 880. Seminar in Laboratory Sciences (1–3). Discusses recent issues and advances in the field of clinical laboratory sciences, including the areas of microbiology, chemistry, hematology, immunology, and immunohematology. Students are responsible for assigned topics, using current journal articles as resource material. Prerequisite: departmental consent.
Physical Therapy (PT) 
Graduate Faculty 
Professor: Kenneth Pittiti 
Associate Professors: John Carter, Robert Manske, Barbara Smith, Camilla Wilson (chairperson) 
Assistant Professor: Michael Reiman 
Clinical Assistant Professor: Candy Bahner 

Doctor of Physical Therapy 
The program prepares individuals to enter beginning practice as physical therapists. The graduates are prepared to evaluate neuromuscular, musculoskeletal, sensorimotor, and related functions to determine the degree of muscle strength, motor development, motion, respiratory ventilation, or peripheral circulatory efficiency of individuals. The physical therapist plans and implements appropriate interventions for clients. Graduates are prepared to work in preventive health care as well as rehabilitative care. The program requires full-time study for a period of 36 consecutive months. Students enter the program in the summer semester only.

Admission Requirements 
1. Bachelor's degree from regionally accredited institution; 
2. Minimum grade requirements: 3.000 GPA in the last 60 semester credit hours; 3.000 GPA in prerequisite courses; and 3.000 overall GPA. Receive a grade that generates at least 2.000 credit points per credit hour in all prerequisite courses; 
3. Prerequisite courses must be completed by the end of the spring semester prior to the beginning of summer courses in the curriculum: biology—one semester of introductory biology with a laboratory; anatomy and physiology—minimum of 5 hours with laboratory; college chemistry—two semesters with laboratories; college physics—two semesters with laboratories; English composition—two semesters; exercise physiology—one semester; medical terminology—one semester hour minimum; speech—one semester; mathematics—college trigonometry or equivalent; statistics—one semester; social sciences—psychology, one introductory course and one advanced course; 
4. Physical Therapy clinical observation of twenty (20) hours in one or more physical therapy departments; 
5. International students must submit a minimum TOEFL score of 600 paper-based, 250 computer-based, or 100 Internet-based; and 
6. Official scores from the General Aptitude section of the Graduate Record Examination (GRE), taken within the last five years, with 900 composite score for verbal and quantitative sections.

To be reviewed for admission, applicants should do the following: 
1. Seek an application packet from the Graduate School, and review application process at ptcas.org; 
2. Submit the designated application for admission and supporting transcripts to the Graduate School; and 
3. Submit the designated application to Physical Therapist Centralized Application Service (PTCAS) by the published deadline.

Any applicant who has completed entry-level physical therapist education, regardless of degree or location of program, will NOT be considered for admission to the entry-level DPT program at Wichita State University.

Complete applications are reviewed when received by the department in a timely manner. Applicants will be notified of their admission status by the Graduate School. Once an applicant has been admitted, he or she will be asked to submit a $100 nonrefundable tuition deposit to reserve a space for the summer admission. Once the student enrolls, this money will be counted toward payment of tuition.

Students are advised to contact the department for any changes in the program course requirements or in prerequisite requirements. Information is also available on the department Web site: wichita.edu/pt.

Degree Requirements 
The student must maintain a 3.000 GPA as required by the Graduate School and achieve a grade that generates at least 2.000 credit points per credit hour in each of the following courses:

First Year 

Summer Semester 
PT 700 Pathophysiology for Physical Therapists ........... 3 
PT 708 Intro to Professional Practice I .................. 2 
PT 709 Foundations of Therapeutic Ex. ................. 3 
PT 721 Clinical Practicum & Seminar I ................. 2 

Fall Semester 
PT 725 Anatomy for Physical Therapists ............. 6 
PT 731 Clinical Kinesiology ......................... 3 
PT 736 Physical Agents .................................. 4 
PT 741 Clinical Practicum & Seminar II .............. 2 
PT 751 Foundations of Research ......................... 2 
PT 755 Clinical Pharmacology for Physical Therapists .................. 2 

Spring Semester 
PT 761 Clinical Practicum & Seminar III .......... 2 
PT 770 Musculoskeletal Clinical Medicine ........... 2 
PT 771 Critical Inquiry I .................................. 2 
PT 772 Foundations of Clinical Skills ................. 2 
PT 773 Neuroscience I .................................. 2 
PT 774 Neuromuscular Interventions I .............. 2 
PT 781 Foundations of Musculoskeletal Examination and Intervention .................. 3 

Second Year 

Summer Semester 
PT 800 Clinical Education I .......................... 4 
PT 850 Clinical Education II .......................... 4 

Fall Semester 
PT 821 Professional Practice I .......................... 2 
PT 831 Musculoskeletal Mgmt. of the Upper Quarter .................. 3 
PT 848 Life Span of the Older Adult ................. 2 
PT 851 Critical Inquiry II ............................. 2 
PT 853 Neuroscience II ............................... 2 
PT 854 Neuromuscular Interventions II ............ 2 
PT 857 Integumentary Conditions & Other Medical Interventions .................. 4 

Spring Semester 
PT 861 Professional Practice II .......................... 2 
PT 871 Critical Inquiry III ............................. 2 
PT 873 Neuroscience III ............................... 2 
PT 874 Neuromuscular Interventions III .......... 2 
PT 877 Clinical Practice in Cardiovascular & Pulmonary Conditions ................. 2 
PT 881 Musculoskeletal Management of the Lower Quarter .................. 3 
PT 898 Life Span of the Infant and Child ............ 2 
PT 899 Principles of Education ....................... 2 

Third Year 

Summer Semester 
PT 900 Clinical Education III ......................... 8 

Fall Semester 
PT 950 Clinical Education IV .......................... 8 
PT 921 Professional Practice III .......................... 2 
PT 931 Musculoskeletal Management of the Spine .................. 3 
PT 990 Clinical Conference I .......................... 1 
Electives: Students may take up to 3–4 credit hours. 

Spring Semester 
PT 970 Clinical Education V .......................... 8 
PT 975 Diagnostic Imaging for the Physical Therapist .................. 1 
PT 991 Clinical Conference II .......................... 1 
Elective(s): 3 credit hours required to complete program. Students may take up to 3–5 additional credit hours of elective coursework, with departmental consent. The courses include PT 790, 799, 840, 932, 933, 934, 941, 942, 943, 951, or 980.

Special Requirements 
Students will be required to purchase uniforms and other clinical apparel, professional liability insurance, health insurance coverage, and specified immunizations, as well as submit evidence of an annual physical examination while in the program. Students must also be certified in cardiopulmonary resuscitation (CPR) prior to entering the program, and must maintain that certification during their enrollment in the curriculum.
Students are expected to provide their own transportation to and from the health care facilities used for clinical experiences. During clinical assignments outside Wichita, students may be required to pay all living and travel expenses.

Students are referred to the Department of Physical Therapy Student Handbook for more details on special departmental policies and procedures.

Master of Physical Therapy

This degree program has been replaced by the Doctor of Physical Therapy (DPT). No additional students will be admitted into the Master's Program.

Courses for Graduate Students Only

PT 700. Pathophysiology for Physical Therapists (3). Focuses on the differentiation of major disease pathophysiology at the micro and macro levels. Content is specific to physical therapists and emphasizes causes and effects on the overall physical capacities of a patient/client as they relate to prevention and rehabilitation.

PT 708. Introduction to Professional Practice I (2). Focuses on foundational concepts of the profession of physical therapy and doctoring professions. Knowledge in psychological development and dynamics is related to interactions with patients and clients. Students will have the opportunity to evaluate individual values and personality preferences that influence their interactions with others, and to develop interpersonal skills for working effectively with patients, families and professional colleagues. Appreciation of psychological and social diversity is emphasized.

PT 709. Foundations of Therapeutic Exercise (3). An introduction to the scientific principles of therapeutic exercise foundations and techniques for physical therapists. Designed to follow the Guide to Physical Therapist Practice. Laboratory sessions include skill development for safe, effective use of commonly used therapeutic exercise equipment.

PT 721. Clinical Practicum & Seminar I (2). The first of a three-course series that focuses on the integration of physical therapy knowledge, skills and professional values within a seminar setting and part-time clinical experience. A variety of professional and practice issues are examined.


PT 731. Clinical Kinesiology (3). Details and analyzes kinesiological and biomechanical foundations that are required to differentiate causes of musculoskeletal dysfunction.

PT 736. Physical Agents (4). Presents concepts and practical applications of a host of therapeutic modalities. Indications, contraindications and the appropriateness of these modalities are assessed.

PT 741. Clinical Practicum & Seminar II (2). The second of a three-course series that builds on the integration of physical therapy knowledge, skills and professional values within a seminar setting and part-time clinical experience. A variety of professional and practice issues are examined.

PT 751. Foundations of Research (2). Critical analysis of the scientific literature focusing on design and statistics for physical therapy and related disciplines. Successful completion of this course gives the student a foundation for designing and interpreting a research project or paper.

PT 755. Clinical Pharmacology for Physical Therapists (2). Details major classes of pharmacological agents. Pharmacokinetics, mechanisms of action, side effects, drug interactions, contraindications, therapeutic use, and appropriate drug monitoring are addressed. Clinical application of this knowledge emphasizes the physical therapist’s role in assessment, management, and proper referral of patients experiencing sub-therapeutic benefits or drug-related problems.

PT 761. Clinical Practicum & Seminar III (2). The last of a three-course series that culminates with the integration of physical therapy knowledge, skills and professional values within a seminar setting and part-time clinical experience. A variety of professional and practice issues are examined.

PT 770. Musculoskeletal Clinical Medicine (2). Differentiates etiology, diagnosis, pathology, medical treatment, and prognosis for orthopedic conditions that are managed by physical therapists.

PT 771. Critical Inquiry I (2). The first in a series of three consecutive research application courses following Foundations of Research for physical therapy and related disciplines. Students work with an assigned adviser to plan either a research project or a research paper, that will be implemented and evaluated in subsequent courses.

PT 772. Foundations of Clinical Skills (2). Provides specialized instruction for common patient care skills including bed positioning, transfers, gait training with assistive devices, vital signs, infection control, and selected screening tests.

PT 773. Neuroscience I (2). First of three courses describing the relationship of structure and function of the nervous system with selected neuromuscular conditions. Specifically covers the spinal cord and cerebral circulation and the effects of injury/disease to these structures.

PT 774. Neuromuscular Interventions I (2). First of three courses detailing examination, assessment and interventions for patients with neuromuscular conditions. Patients with spinal cord injuries and cerebral vascular accident are assessed and evaluated.

PT 781. Foundations of Musculoskeletal Examination & Intervention (3). Emphasizes the scientific foundation and clinical rationale used during assessment, evaluation and intervention with musculoskeletal conditions. Provides specialized instruction in the art of palpating surface anatomy, performance of manual muscle testing, and goniometric measurements. An emphasis is placed on the clinical and scientific literature pertaining to evaluation and treatment of musculoskeletal conditions.

PT 788. Life Span of the Adult (2). Focuses on the relationship of structure and function to the development of movement skills in adulthood.

PT 790. Selected Topics in Physical Therapy (1–4). Intensive study of current issues, technology, research, and application of selected topic.

PT 791. Principles of Orthotics (1). Addresses the art and science of orthotics, the concepts underlying the selection and application of common orthotic devices, recent developments in materials and fabrication methods, and clinical decision making about appropriate recommendations and use of orthotic devices.

PT 799. Experimental Courses (1–4). One-time course offerings.

PT 800. Clinical Education I (4). Prepares the student to provide physical therapy care in varied settings requiring communication and interpersonal relations skills; professional socialization; application of physical therapy procedures; beginning development of a generalist in physical therapy.

PT 821. Professional Practice I (2). The first of three courses designed to provide students with an overview of health systems, health regulation, risk management, and administrative theory and principles as related to the practice of physical therapy. Primary focus is health policy and health systems.

PT 831. Musculoskeletal Management of the Upper Quarter (3). Emphasizes the scientific foundation and clinical rationale used during assessment, evaluation, and intervention with musculoskeletal conditions. Builds on the foundations from various courses during the first year of the DPT curriculum. It provides an in-depth study of different injuries and lesions, specific evaluation techniques, and treatments of those injuries and pathologies of the upper quarter. Emphasis is placed on organizing and synthesizing information from courses throughout the physical therapy curriculum to allow integration of problem-solving skills that enables students to better make the transition from students to competent practicing physical therapists.

PT 840. Directed Study (1–3). Individual study with a focus developed in collaboration with a departmental faculty member. Allows students to pursue an area of special interest in physical therapy.

PT 848. Life Span of the Older Adult (2). Focuses on the relationship of structure and function to the development of movement skills through older age. Second of three courses.

PT 850. Clinical Education II (4). Prepares the student to provide physical therapy care in varied settings requiring communication and interpersonal relations skills; professional socialization; application of physical therapy procedures; beginning development of a generalist in physical therapy.

PT 851. Critical Inquiry II (2). The second in a series of three consecutive research application courses following Foundations of Research for physical therapy and related disciplines. Students work with an assigned adviser to complete a preliminary draft of either a research project or a research paper.
PT 853. Neuroscience II (2). Second of three courses describing the relationship of structure and function of the nervous system with selected neuromuscular conditions. Specifically covers the medulla, basal ganglia, and cranial nerves and the effects of injury/disease to these structures.

PT 854. Neuromuscular Interventions II (2). Second of three courses detailing examination, assessment and interventions for patients with neuromuscular conditions. Patients with problems of the visual system and the basal ganglia are assessed and evaluated.

PT 857. Integumentary Conditions & Other Medical Interventions (4). Addresses selected integumentary system conditions and special conditions. The primary focus is examination, clinical decision making, and treatment planning for these conditions. Roles of other health care team members and interactions with physical therapists are discussed relative to these conditions.

PT 861. Professional Practice II (2). The second of three courses designed to provide students with an understanding of health systems, health regulation, risk management, and administrative theory and principles as related to the practice of physical therapy. The primary focus is health regulation and administration theory and principles.

PT 871. Critical Inquiry III (2). The third in a series of three consecutive research application courses following Foundations of Research for physical therapy and related disciplines. Students work with an assigned adviser to finalize and disseminate either a research project or a research paper and give a formal oral presentation of their work.

PT 873. Neuroscience III (2). Third of three courses describing the relationship of structure and function of the nervous system with selected neuromuscular conditions. Specifically covers the cerebellum, cerebrum and limbic system and the effects of injury/disease to these structures.

PT 874. Neuromuscular Interventions III (2). Third of three courses detailing examination, assessment and interventions for patients with neuromuscular conditions. Patients with problems of sensory integration, motor control and the vestibular system are assessed and evaluated.

PT 877. Clinical Knowledge & Practice in Cardiovascular & Pulmonary Conditions (2). Develops clinical skills in examining, assessing and managing patients/clients with cardiovascular and pulmonary impairments. Common pathophysiology of the cardiovascular and pulmonary system are covered.

PT 881. Musculoskeletal Management of the Lower Quarter (3). Reviews the basic scientific foundation and clinical rationale used during evaluation, assessment and treatment of musculoskeletal conditions of the lower quarter. Elaborates on the foundations brought forth from various courses during the first year of the DPT curriculum. Evokes an in-depth study of different injuries and lesions, specific evaluation techniques, and treatments of those injuries and pathologies. Emphasis is placed on organizing and synthesizing information from courses throughout the physical therapy curriculum to allow integration and problem-solving skills that enables students to better make the transition from students to competent practicing physical therapists.

PT 898. Life Span of the Infant & Child (2). Details the relationship of structure and function to the development of movement skills from birth through adolescence. Third of three courses.

PT 899. Principles of Education for Physical Therapists (2). Applies teaching and learning theories as they apply to physical therapy education of patients, students, health professionals and community. Methods of evaluating instruction, content, strategies, and learners are included.

PT 900. Clinical Education III* (8). First in a series of three eight-week courses offering continual development of clinical management of patients in varied clinical settings. Includes managerial aspects of care, teaching and some opportunities for clinical research.

PT 921. Professional Practice III (2). The third of three courses designed to provide students with an understanding of health systems, health regulation, risk management, and administrative theory and principles as related to the practice of physical therapy. The primary focus is risk management and compliance with institutional, state, and federal regulation.

PT 931. Musculoskeletal Management of the Spine (3). Introduces the student to the basic scientific foundation and clinical rationale used during evaluation, assessment and treatment of musculoskeletal conditions of the spine. Designed to build on the foundations brought forth from previous courses. Students study in depth different injuries and lesions, specific evaluation techniques, and treatments of those injuries and pathologies of the spine, sacroiliac joint, and pelvis. Emphasis is placed on organizing and synthesizing information from courses throughout the physical therapy curriculum to allow integration of problem-solving skills that enables students to better make the transition from students to competent practicing physical therapists.

PT 932. PT Sports Orthopedics (2). Introduces the student to the basic foundation of sports physical therapy. Includes education related to assessment and treatment of sports related injuries, emergency care, and musculoskeletal conditions, skin conditions, environmental conditions and use of protective equipment. Designed for individuals ultimately seeking specialization in the area of sports physical therapy and eventually working toward ABPTS—Sports PT Section Advanced Clinical Competencies.

PT 933. Advances in Orthotics for Orthopedics (1). Introduces the student to the rationale and the clinical application of a variety of treatment approaches for patients with hand or foot pathology. Splint fabrication and application for the upper extremity are covered. Lower extremity orthotics prescription, ordering, fabrication and fitting are covered.

PT 934. PT Advanced Strength & Conditioning in the Athletic Population (2). Introduces the student to the basic foundation of strength and conditioning principles. Includes education related to assessment of strength and power in the athletic population, adaptations to such training, and program design for this specialized population. Designed for physical therapists ultimately seeking specialization in the area of athletic strength and conditioning, with goals of pursuing certification in Olympic weightlifting and/or as a certified strength and conditioning specialist.

PT 941. PT Program Planning, Implementation and Evaluation I (2). Students develop a service learning or clinical program with five primary components: needs analysis, program proposal, marketing, delivery, and assessment.

PT 942. PT Program Planning, Implementation and Evaluation II (2). Students continue to develop a service learning or clinical program with five primary components: needs analysis, program proposal, marketing, delivery, and assessment.

PT 943. Practice Management (2). Designed for the student whose goals are to manage a therapy department and/or start a private practice. Familiarizes students with assessing the marketplace, developing policies and procedures for the department/practice, planning and designing a facility, hiring personnel and other staffing considerations, marketing the department/practice, budgeting, knowing requirements necessary to meet local, state and federal regulations, and developing a business plan. The student partners with an appropriate mentor.

PT 950. Clinical Education IV* (8). Second in a series of three eight-week courses offering continual development of clinical management of patients in varied clinical settings. Includes managerial aspects of care, teaching and some opportunities for clinical research.

PT 951. Evidence-Based Practice (1). Focuses on the use of current best evidence from clinical care research in the management of patients. Students gain knowledge of how to understand and appraise evidence from research.

PT 970. Clinical Education V* (8). Last in a series of three eight-week courses offering continual development of clinical management of patients in varied clinical settings. Includes managerial aspects of care, teaching and some opportunities for clinical research.

PT 975. Diagnostic Imaging for the Physical Therapist (1). Normal and abnormal radiographic findings in the spine and extremities are covered. Cinemaradiography, functional radiographs, MRI, CT-Scan, and tomography are studied. A variety of pathologies affecting the practice of physical therapy are identified. Radiographic findings are correlated to common surgical procedures seen by the physical therapist. Radiographic findings as well as physical findings that require prompt referral to other disciplines within the health care team are also addressed.

PT 980. Licensure Exam Review (2). Students review and apply knowledge and skills learned in preceding academic semesters and clinical education experiences, learn test taking strategies, and develop a comprehensive study plan to assist them in preparing for the National Physical Therapy Examination.

PT 990. Clinical Conference I (1). Clinical Conference (CC) is a forum for discussion of a clinical case presented by a group of students. Its focus is to facilitate application and integration of didactic information from the classroom into clinical practice by expanding clinical problem solving through examination of clinical cases. A formal presentation covering selected background information is followed by a presentation of the case. Ideally, research supporting the reliability/validity of evaluation
tools and efficacy of treatment is presented as well. CC is designed to afford students the opportunity to work as a team to present clinical cases to their peers and faculty.

PT 991. Clinical Conference II (1). Clinical Conference (CC) is a forum for discussion of a clinical case presented by a group of students. Its focus is to facilitate application and integration of didactic information from the classroom into clinical practice by expanding clinical problem solving through examination of clinical cases. A formal presentation covering selected background information is followed by a presentation of the case. Ideally, research supporting the reliability/validity of evaluation tools and efficacy of treatment is presented as well. CC is designed to afford students the opportunity to work as a team to present clinical cases to their peers and faculty.

*In the series of three final clinical courses, students experience three different settings including general and rehabilitation practices and a selected area of specialization not limited to pediatrics, geriatrics, and orthopedics. The order of the settings is flexible. There is an increase in the level of expectation of performance with each clinical course which is guided by the evaluation process.

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**Physician Assistant (PA)
Graduate Faculty
Professor: Richard Muma
Associate Professors: LaDonna Hale, Sue Nyberg
(Chairperson), Timothy Quigley
Assistant Professor: Gina Brown
Instructors: Patricia Bunton, Catherine Toomey, Lucas Williams

Master of Physician Assistant
The graduate program in physician assistant studies, located in the department of physician assistant at Wichita State University, is the only one of its kind in Kansas. The program prepares one to practice medicine with the supervision of a licensed physician. The functions of a physician assistant include performing diagnostic, therapeutic, preventative and health maintenance services in any setting in which the physician renders care, in order to allow more effective and focused application of the physician's particular knowledge and skills.

The WSU department of physician assistant, accredited by the Accreditation Review Commission on the Education of Physician Assistants (ARC-PA), offers a 26-month (full-time, lock-step) graduate course of study which leads to a professional Master of Physician Assistant degree. The course of study is divided into two parts: a 42-semester-hour didactic phase and a 40-semester-hour clinical/research phase. One class is admitted each summer.

Professional Curriculum
The professional curriculum is divided into two phases: a didactic phase and a clinical/research phase. Each phase lasts 12–14 months. The didactic year includes graduate coursework in the basic sciences (anatomy, pharmacology, pathophysiology), clinical medicine, research methods and statistics, epidemiology, behavioral medicine, ethics, preventive medicine and community health, social and legal issues, and clinical skills.

The clinical/research year is a series of clinical rotations in a variety of medical settings primarily in Kansas, and directed studies in research leading to the completion of a final research project. Students are required to complete rotations in primary care (family practice, internal medicine, pediatrics), emergency medicine, surgery, prenatal care/women's health, and hospital medicine. Students complete nine rotations of 4–8 weeks each (approximately 50 total weeks). All students are required to complete a minimum of three rotations outside the city of Wichita with at least three rotations in a rural or urban underserved community. Students are expected to pay for transportation to clinical sites and, in some situations, room and board.

Admission
Minimal requirements for application to the PA program:
1. A bachelor’s degree from a regionally accredited U.S. college or university is required prior to matriculation with additional prerequisite coursework below if not included in the bachelor’s degree. Coursework more than 10 years old will be subject to departmental review and in some cases applicants may be required to repeat certain courses. Acceptance of foreign bachelor’s degrees will be decided on an individual basis and after evaluation by a transcript evaluation service.

2. Preferably candidates should have a bachelor’s degree and all prerequisite coursework completed at the time of application. Those that do not can apply if outstanding coursework is within two semesters of completion (outstanding coursework can only include four prerequisite science courses at the time of application). The bachelor’s degree and prerequisite coursework in progress must be completed before starting the program. Successful completion of degree and coursework must be verified if accepted and before acceptance is finalized.

3. GPA requirements (on a 4.000 scale) apply to both the degree and prerequisite coursework: 3.000.

4. Demonstrated commitment to diversity, leadership, and service.

5. Completion of on-site interview with program faculty, which will include (but not be limited to) an assessment of academic potential, motivation and commitment to the PA profession, and interpersonal and communication skills. Not all applicants will be offered an interview.

6. Health care experience (direct patient care) is strongly preferred, but not required.

7. To be considered for the PA program the following three steps must be completed:
   a. Primary CASPA (national) application, including all transcripts and letters of recommendation (deadline Oct. 1);
   b. Supplemental application—if the program determines that the applicant meets minimum admission requirements (after review of the CASPA application), a supplemental application is mailed to the
applicant to be returned within two weeks after receipt; and
e. University Graduate School application, including official transcripts from all institutions attended (deadline Oct. 15).

Notes:
1. The ability to meet the Academic and Technical Standards for Physician Assistant Students is required (contact the program for more information).
2. Application to the program is competitive, which means there are more applications than positions offered each year.
3. Refer to the department’s Web site at dhcp.wichita.edu/pa for complete information.

Special Requirements
Students will be required to purchase uniforms, medical equipment, professional liability insurance, and health insurance coverage. Each year while enrolled in the program students are required to have an annual health history and physical examination (with documentation of appropriate immunizations and screening tests). Students, at their own expense, must also be certified in cardiopulmonary resuscitation (CPR) and pass a background check prior to entering the program.

Students are expected to provide their own transportation to and from the health care facilities used for clinical experiences (located throughout the states of Kansas and Oklahoma). During clinical assignments outside Wichita, students may be required to pay all living expenses.

Students are referred to the department of physician assistant student handbooks for more details on special departmental policies and procedures.

Financial Assistance
Many MPA students seek the assistance of WSU’s Office of Financial Aid in applying for loans and grants available for graduate students. In addition, the College of Health Professions awards several fellowships each academic year, and the department of physician assistant has five fellowships available to MPA students once enrolled in the program. Furthermore, there are several national scholarship programs supported by the federal government and national PA associations that are available. Information about such programs is distributed to students during interviews.

Degree Requirements/Professional Coursework
Minimal requirements for completion of the physician assistant program include maintaining a GPA of 3.000 as required by the Graduate School, maintaining acceptable academic performance as outlined in the PA student handbooks, passing all didactic/clinical courses/rotations with satisfactory grades, and autonomously demonstrating competence in all program and course objectives.

First/Didactic Year

<table>
<thead>
<tr>
<th>Term</th>
<th>Course Code</th>
<th>Course Description</th>
<th>Credits</th>
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<tbody>
<tr>
<td>Summer Semester</td>
<td>PA 789</td>
<td>Clinical Anatomy</td>
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<tr>
<td>Full Semester</td>
<td>PA 700</td>
<td>Physician Assistant Theory I</td>
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<td></td>
<td>PA 725</td>
<td>Physician Assistant Theory II</td>
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<td>PA 715</td>
<td>Physician Assistant Practice</td>
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<td>PA 720</td>
<td>Pathophysiologic Assessment I</td>
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<td>PA 726</td>
<td>Physician Assistant Research Methods</td>
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<td></td>
<td>HS 710</td>
<td>Applied Clin. Pharmacology</td>
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Second/Clinical Research Year

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<th>Credits</th>
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<tbody>
<tr>
<td>Summer Semester</td>
<td>PA 525</td>
<td>Special Topics</td>
<td>1</td>
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<tr>
<td></td>
<td>PA 896</td>
<td>Directed Study in Research I</td>
<td>2</td>
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<tr>
<td></td>
<td>PA 810</td>
<td>Adv. Clinical Mgmt. Rotation I</td>
<td>3</td>
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<tr>
<td></td>
<td>PA 832</td>
<td>Clinical Assessment Seminar</td>
<td>3</td>
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<td></td>
<td>PA 897</td>
<td>Directed Study in Research II</td>
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<td>PA 826</td>
<td>Adv. Clinical Mgmt. Rotation Elective</td>
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<td>PA 898</td>
<td>Directed Study in Research III</td>
<td>2</td>
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<td>Summer Semester</td>
<td>PA 899</td>
<td>Clinical Preceptorship</td>
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<td>Total hours for degree</td>
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</table>

Courses for Graduate/Undergraduate Credit

PA 525. Special Topics (1–4). Lecture/discussion; focuses on a discrete area content relevant to the health disciplines. In-depth study of a particular topic or concept, including didactic and current research findings and technological advances relevant to the topic. Open to non-majors; requires departmental consent.

Courses for Graduate Students Only

PA 700. Physician Assistant Theory I (3). Provides advanced theoretical knowledge and skills necessary to obtain an appropriate medical history and physical examination. Includes additional emphasis on the identification of normal and abnormal physical findings. Practice of methods and techniques learned takes place in a faculty-proctored laboratory setting. Opportunities are provided for observation and participation in the medical history and physical examination in inpatient and outpatient settings. Prerequisite: admission to PA professional program. Corequisite: PA 725.

PA 715. Physician Assistant Practice (3). Introduces the student to a wide variety of issues relevant to PA practice. Issues covered include common legal, ethical, and professional concerns facing practicing PAs in clinical, laboratory, educational, research, and administrative settings. Emphasis is placed on health care delivery, health care administration, credentialing, continuing education, medical informatics, advancements in medical technology, genetic testing, laboratory procedures and interpretation, and end-of-life decisions. Prerequisite: admission to PA professional program.

PA 720. Pathophysiologic Assessment I (3). An advanced pathophysiologic and clinical assessment/management course of the cardiopulmonary system that builds on prerequisite coursework. Covers normal physiology, major disease pathophysiology, diagnosis, treatment, prognosis, and disease prevention as it relates to cardiopulmonary medicine. Evidence-based medicine is integrated throughout the course. Evaluation of diagnostic studies is addressed as applicable to the primary care setting. Emphasis is placed on x-ray, ECG, pulmonary function testing, blood gas, and laboratory study interpretation as well as indications for endoscopic procedures. Prerequisite: admission to PA professional program.

PA 722. Pathophysiologic Assessment II (3). An advanced pathophysiologic and clinical assessment/management course of the gastrointestinal system that builds on prerequisite coursework. Covers normal physiology, major disease pathophysiology, diagnosis, treatment, prognosis, and disease prevention as it relates to gastrointestinal medicine. Evidence-based medicine is integrated throughout the course. Evaluation of diagnostic studies is addressed as applicable to the primary care setting. Emphasis is placed on x-ray, and laboratory study interpretation as well as indications for endoscopic procedures. Prerequisite: admission to PA professional program.

PA 723. Pathophysiologic Assessment III (5). Advanced pathophysiologic and clinical assessment/management course of the reproductive, genitourinary/renal, and endocrine systems that builds on prerequisite coursework. Covers normal physiology, major disease pathophysiology, diagnosis, treatment, prognosis, and disease prevention as it relates to reproductive, genitourinary/renal, and endocrine medicine. Evidence-based medicine is integrated throughout the course. Evaluation of diagnostic studies including x-rays and laboratory studies is addressed as applicable to the primary care setting. Skills emphasized include breast, pelvic, testicular, and renal examination and urinary catheterization. Prerequisite: admission to PA professional program.

PA 725. Physician Assistant Theory II (3). Introduces emerging theories in the behavioral sciences, preventive medicine, public health, health promotion, and epidemiology. The goal is the development and integration of knowledge and skills that incorporates all theories. Areas of emphasis include growth and development, patient counseling, patient education, evaluation and management of psychosocial diseases in the primary care and emergency setting, risk factors for major causes of death and disability, behavioral techniques used in making health behavior change, health-risk appraisal instruments, health
screening, disease and accident prevention, and further study of the distribution and determinants of disease frequency in human populations. Prerequisite: admission to PA professional program. Corequisite: PA 700.

PA 726. Physician Assistant Research Methods (3). An introductory course concerning the basic concepts of research methodology as appropriate to the physician assistant professional. Focuses on types of research, research questions and methods (both qualitative and quantitative), review of basic statistics, interpreting the medical literature using evidence-based techniques, literature reviews, data analysis (using computer technology), reporting results, summarizing findings, and the ethical concerns of research. Successful completion of course gives the student a foundation for designing and interpreting a research project or paper. Prerequisite: admission to PA professional program.

PA 733. Pathophysiologic Assessment IV (5). Advanced pathophysiologic and clinical assessment/management course of the EENT, neurovascular, and dermatologic systems that builds on prerequisite coursework. Covers normal physiology, major disease pathophysiologies, diagnosis, treatment, prognosis, and disease prevention as it relates to EENT, neurovascular, and dermatologic medicine. Evidence-based medicine is integrated throughout the course. Evaluation of diagnostic studies including X-rays and laboratory studies is addressed as applicable to the primary care setting. Skills emphasized include nasal packing, cerumen removal, indirect laryngoscopy, orthopedic casting, wound suturing, IVs, and sterile surgical technique. Prerequisite: admission to PA professional program.

PA 736. Applied Clinical Practice (3). Advances theories and skills learned in PA 700 by emphasizing patient management, clinical problem solving, and critical thinking skills in both inpatient and outpatient settings. Includes small-group discussions, problem-oriented physical examinations (POPEs), objective-structured clinical examinations (OSCEs), and experiences in cultural awareness. Medical documentation, reimbursement, and managed care are also emphasized. Prerequisite: admission to PA professional program.

PA 789. Clinical Anatomy (5). A graduate-level comprehensive clinical anatomy course that builds on prerequisite anatomy coursework and emphasizes an advanced understanding and integration of human anatomy of the back, upper extremity, lower extremity, head, neck, thorax, and gastrointestinal and genitourinary systems. Cadaver prospection is demonstrated in a laboratory setting. Prerequisite: admission to PA professional program.

PA 810. Advanced Clinical Management Rotation I (3). A four- to six-week advanced clinical experience that builds on pathophysiologic assessment coursework in which students are supervised by physicians and expected to function as student clinicians in a variety of medical settings. Emphasis is on obtaining and documenting appropriate medical histories and physical examinations, integrating and interpreting patient data, forming medical diagnoses, developing and implementing management plans including therapeutic regimens, and performing medical and surgical procedures. Rotation assignments include one or more of the following: family medicine, general internal medicine, pediatrics, prenatal care, gynecology, general surgery, emergency medicine, psychiatry/behavioral medicine, and geriatrics. Prerequisite: admission to PA professional program.

PA 812. Advanced Clinical Management Rotation II (3). A four- to six-week advanced clinical experience which is a continuation of PA 810. Prerequisite: admission to PA professional program.

PA 814. Advanced Clinical Management Rotation III (3). A four- to six-week advanced clinical experience which is a continuation of PA 812. Prerequisite: admission to PA professional program.

PA 818. Advanced Clinical Management Rotation IV (3). A four- to six-week advanced clinical experience which is a continuation of PA 814. Prerequisite: admission to PA professional program.

PA 819. Advanced Clinical Management Rotation V (3). A four- to six-week advanced clinical experience which is a continuation of PA 818. Prerequisite: admission to PA professional program.

PA 822. Advanced Clinical Management Rotation VI (3). A four- to six-week advanced clinical experience which is a continuation of PA 819. Prerequisite: admission to PA professional program.

PA 825. Advanced Clinical Management Rotation VII (3). A four- to six-week advanced clinical experience which is a continuation of PA 822. Prerequisite: admission to PA professional program.

PA 826. Advanced Clinical Management Elective Rotation (3). A four- to six-week advanced clinical experience which is a continuation of PA 825. Prerequisite: admission to PA professional program.

PA 832. Clinical Assessment Seminar (3). An advanced assessment/semiannual course geared toward the second-year physician assistant student. Primary focus is to assess cognitive and clinical skills as required by the Accrediting body. Emphasis includes further assessment of knowledge and skills through standardized means, discussion of professional practice and malpractice issues, and review sessions for national certification exam. Prerequisite: admission to PA professional program.

PA 896. Directed Study in Research I (2). First in a series of three courses following PA 726 in which students work with an assigned PA faculty adviser to plan and begin a research project or paper. Emphasis is placed on developing a research question, conducting a literature review, and formulating a methodology for a research project or paper. Prerequisites: PA 726 and admission to PA professional program.

PA 897. Directed Study in Research II (2). Second in a series of three courses following PA 726 in which students work with an assigned PA faculty adviser to continue their research project or paper. Emphasis is placed on collecting data and statistical analysis as appropriate for a research project or paper. Prerequisites: PA 726, 896, and admission to PA professional program.

PA 898. Directed Study in Research III (2). Third in a series of three courses following PA 726 in which students work with an assigned PA faculty adviser to continue their research project or paper. Emphasis is placed on interpreting and reporting data as appropriate for a research project or paper. Submission of a final research project or paper suitable for dissemination in a peer-reviewed forum is required before graduation. An oral presentation and defense of the paper and project is required before graduation. Prerequisite: PA 726, 896, 897, and admission to PA professional program.

PA 899. Clinical Preceptorship (6). An eight-week course that is a culmination of the student’s professional training. Emphasis is student placement with a physician, enabling them to function as members of the health care team similar to what would be encountered by the graduate physician assistant. Students are expected to integrate didactic, clinical, and research skills. Prerequisites: PA 726, 896, 897, 898, and admission to PA professional program.

**Public Health Sciences (PHS)**
Graduate Faculty
Professors: Peter A. Cohen (Dean), Richard D. Muma (Chairperson), Associate Professor: Ngoyi K. Bukonda, Charles Fox, Ruth B. Pickard, Dexter A. Woods
Assistant Professor: Ann P. Hunter
Instructors: Janet Brandes, Amy Drassen-Ham

The Department of Public Health Sciences no longer offers the Master of Public Health degree. A graduate certificate in public health is available for individuals whose primary goal is core public health training.

**Master of Public Health (MPH)**
After due consideration, the university decided to suspend the MPH program at the conclusion of the spring 2006 semester. No new applications will be considered for admissions.

**Administrator-in-Training (AIT) Practicum Placement Program**
The AIT is designed to place qualified applicants in a 9-credit-hour, 480-clock-hour practicum placement with a qualified nursing home administrator, as part of the preparation necessary for becoming a licensed nursing home administrator in the state of Kansas.

The AIT practicum placement program is available to individuals with a bachelor’s degree, who have had coursework in gerontology or long-term care, management concepts, and finance or accounting. The required courses are available through the department of physician assistant, health services management and community development program, for those interested applicants who have not taken such coursework prior to considering a career as a nursing home administrator. The Bachelor of Science degree in health services management and community development, provides program majors with the coursework required for AIT placement. Interested program majors may pursue the AIT requirements while completing their degree programs. Additional information on the AIT is available through the HMCD program.
Graduate Certificate in Public Health Program
A graduate certificate in public health provides documentation that a student has completed a core set of public health courses beyond the bachelor's degree level. Through the graduate certificate in public health program, graduates will bring population-based health knowledge to their work in health and medicine. The program covers principles and issues in health care policy and administration, the social and behavioral aspects of public health, epidemiology, environmental health, and biostatistics.

The required courses for this certificate are based on the five areas defined by the Council on Education for Public Health to be the basic areas of public health knowledge. The courses are offered on a fixed schedule so that all are taught once a year. Students can complete the coursework (15 credit hours) in 24 months. The courses are offered at 4:30 p.m. or later to accommodate working professionals.

Admission to this graduate certificate program in public health requires that the applicant meets the following criteria:
1. Possess a bachelor's degree from a regionally accredited institution, or a foreign university with substantially equivalent requirements for the bachelor's degree, and have a minimum GPA of 2.750 in the last 60 hours of coursework; and
2. Demonstrate evidence of training and/or experience indicative of adequate preparation for the curriculum. This could include a degree in a recognized health profession, one or more years of responsible work experience in the health field, or other relevant evidence; and
3. Submit an official report of completion of the Test of English as a Foreign Language (TOEFL) with a composite score of 570 or above, or overall band score of 7.0 on IELTS exam if the native language is not English. This report must be no more than two years old at the time it is reviewed by the certificate admissions committee.

The total number of credit hours required for the certificate in public health is 15, with a cumulative grade point average of 3.000 or above and no grade that generates less than 2,000 credit points per credit hour. Students must complete the following courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>PHS 804</td>
<td>Principles of Statistics in Health Sciences</td>
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<tr>
<td>PHS 808</td>
<td>Principles of Epidemiology</td>
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</tr>
<tr>
<td>PHS 812</td>
<td>Health Care Policy and Administration</td>
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<tr>
<td>PHS 814</td>
<td>Social &amp; Behavioral Aspects of Public Health</td>
<td>3</td>
</tr>
<tr>
<td>PHS 816</td>
<td>Environmental Health</td>
<td>3</td>
</tr>
</tbody>
</table>

The deadline for guaranteed review of applications to the public health certificate program is June 1 for the fall semester, and November 1 for the spring semester.

Courses for Graduate/Undergraduate Credit

HMCD 621. Supervisory Management in Health Care Organizations (3). A study of supervisory management concepts and techniques that apply to health care organizations and programs. Emphasizes on understanding the health care environment and its various health care settings, the identification of issues facing front-line employees, supervisors and mid-level managers, and the development of administrative and leadership skills necessary to successfully lead health care work teams. Identifies, analyzes and solves problems that clinical department heads, supervisors, and other health related mid-management personnel encounter in their work. The principles of effective management techniques—planning, decision making, organizing, budgeting, time management, leadership, direction, delegation, communication, motivation, discipline, performance appraisal, management of change, teamwork, effective meeting, working with unions, quality improvement, and career development—are covered. Prerequisite: HMCD 310.

HMCD 622. Human Resources Management in Health Care Organizations (3). Intended for clinical health care professionals who have responsibility for managing people in health care organizations. Also intended for health care management students who will have responsibility for managing people in health services organizations. An introduction to the essential theories, components, and issues of human resources management in the health care field. Includes the study of the effectiveness of the human resources management function, employee recruitment, selection, training, performance appraisal, benefits and compensation, employee relations and other relevant legal requirements affecting employment. Covers issues of contemporary relevance for human health services resources departments such as employee health and safety, employee assistance programs, occupational stress and job burnout, violence in the workplace and work/family issues. Students are required to learn and demonstrate the ability to analyze human resources problems and to present sound solutions. Students are expected to learn and demonstrate effective group working skills as they join small groups and engage in collaboratively solving a number of human resources management problems. Prerequisite: HMCD 310.

HMCD 623. Coalition Building (3). Designed to familiarize students with the factors influencing successful collaboration in community health services. Emphasizes the application of this material to the development of community-based coalitions, alliances, committees, and partnerships. Format includes lecture, group and individual examination of the literature, analysis of case studies, and fieldwork. Prerequisite: HMCD 333 and senior standing in the HMCD program, or instructor's consent.

HMCD 625. Special Topics in Health Services (3). Designed to provide students with the opportunity to explore, in detail, a current topic relevant to health management and community development. Students review current research related to the selected topic, provide weekly presentations, engage in discussion, and produce a term paper. Also includes lecture and guest arrangements from outside the department and the institution. Prerequisite: senior standing in the HMCD program, or instructor's consent.

HMCD 642. Financing Health Care Services (3). Examines the principles of financial analysis and management used in health care institutions, which are most useful to non-financial personnel. Emphasizes understanding and application of general financial concepts crucial to the health setting; considers financial organization, sources of operating revenues, budgeting and cost allocation methods. Uses examples for various types of health service organizations. Prerequisite: senior standing in the HMCD program, or instructor's consent.

HMCD 643. Introduction to Geographic Information Systems (GIS) (3). Skills-based course introduces a group of software tools used in health care and many other professions to analyze and model spatial data. These powerful epidemiological tools provide mechanisms to track and map health and disease indicators, to explore clusters of risk factors and their relationships, and to better manage health care and social service resources. Properly applied, they illuminate community needs and promote efficient and effective program responses. GIS's outstanding integrative abilities are increasingly valued by those who need to synthesize multiple information streams in their decision making. Furthermore, the resulting visual displays, with their ability to improve communication between researchers, administrators, government officials, and the public, are increasingly found in policy debates and educational forums. Prerequisite: HMCD 325 and senior standing in the HMCD program, or instructor's consent.

HMCD 648. Concepts of Quality (3). Addresses the issues of quality assurance in health care institutions and not-for-profit organizations. An overview of the history and current status of quality programs is presented. The role of quality in organizational strategy is also covered. Students study the role of quality from the perspective of the consumer and in the history of healthcare organizations and programs. Emphasis is on understanding the health care environment and the various health care settings, the identification of issues facing front-line employees, supervisors and mid-level managers, and the development of administrative and leadership skills necessary to successfully lead health care work teams. Identifies, analyzes and solves problems that clinical department heads, supervisors, and other health related mid-management personnel encounter in their work. The principles of effective management techniques—planning, decision making, organizing, budgeting, time management, leadership, direction, delegation, communication, motivation, discipline, performance appraisal, management of change, teamwork, effective meeting, working with unions, quality improvement, and career development—are covered. Prerequisite: HMCD 310.

HMCD 663. Community Action Research (3). Introduces a set of applied, interdisciplinary research tools used to better understand and respond to health-related community needs. It reviews a number of action research strategies. Each strategy includes three basic requirements: 1) the focus of the research is on social practices that are potentially able to be improved; 2) the research project spirals through cycles of planning, acting (initiating an intervention), observing (collecting and analyzing data, and drawing conclusions); and 3) the research findings are used to inform policy and practice. Prerequisite: HMCD 310.

Health Professions

Health Professions
PHS 804. Principles of Statistics in the Health Services (3). Introductory statistics for graduate students in the social and health sciences with little or no background in statistics. Provides first year (or equivalent) MPH students with a basic understanding of certain statistical techniques, the appropriate application of these techniques, and use of the software package, SPSS.

PHS 808. Principles of Epidemiology (3). An introductory graduate-level course concerning epidemiological principles and how these form the scientific basis for public health.

PHS 812. Health Care Policy and Administration (3). An in-depth look at policy and management issues in the health system from a public health perspective. Topics include health policy, trends in the health care system, and administrative issues. Topics are critiqued with regard to public health goals, the interests of consumers and providers, and ethics.

PHS 814. Social and Behavioral Aspects of Public Health (3). Examines the characteristics, beliefs and behaviors of individuals and groups involved in the process of health care. Draws on concepts and principles of the social, behavioral, and clinical sciences, especially dynamics that define the interactions of providers and consumers of health care. Explores why people react to perceived symptoms the way they do, the reasons providers respond as they do to patients with different social attributes, the factors which predispose individual reactions to illness and its correlates, and the effects on health of societal agreements and expectations.

PHS 816. Environmental Health (3). A survey course in environmental health designed to provide an understanding of the fundamental theory and methods for the control of disease. Includes environmental law, disease systems, water supplies, plumbing, waste water treatment, food sanitation, vector control, recreation sanitation, solid waste disposal, housing sanitation, and air pollution.

PHS 818. Fundamental Research Methods in Public Health (3). Stresses mastery of basic concepts and techniques of research methodology used in the health professions. Focuses on acquisition of the generic tools of research design and their application to the real-world problems confronting those who deliver health care, those who facilitate and/or manage the delivery of care, those who conduct clinical and health services studies, and those who make policy affecting the delivery arrangements. Prerequisites: PHS 804 and 808.

PHS 821. Community Assessment & Development (3). This community epidemiology course introduces public health theories and methods used to conduct community assessments and to apply the results to positive social change. Students examine the meaning of the key terms community, community-building, and community development within historical and contemporary perspectives. Students learn the importance of starting with such questions as whose community, whose health, whose assessment, and for whose benefit? Students review strategies for community mapping, issue selection, community organizing, and coalition building. They study several approaches for identifying community needs, including organizing, and coalition building. Several approaches for identifying community needs are studied, including the use of secondary data sources, interview methods, focus groups and surveys. Finally, students apply their work to the design (or revision) of a study of the assets and needs of a local target community in regard to a health-related issue.

PHS 824. Cultural Competency in Health Care (3). Uses a community epidemiology approach to examine the changing demographics in 21st century United States, and to analyze the effects of those changes on our health care system. Students explore differences in the distribution of disease among various cultural groups, taking into account the social, biological and political causes behind those differences. They look at gaps between ethnic groups in service availability and access, in therapy options, and in treatment outcomes. Examines how culture affects lifestyle choices, attitudes toward health and illness, help-seeking behaviors, and service utilization.

PHS 826. Politics of Health Policy Making (3). Covers the basic principles of public policy making in health care and public health. Offers the opportunity to students to apply that knowledge in a community-based attempt to impact a positive public health policy development. Skills-based course that demonstrates why things happen as they do in policy-making arenas and what can be done to ensure desired policy outcomes.

PHS 831. Essentials of Health Insurance and Managed Care (3). Health insurance is one of the most powerful ingredients in the U.S. health care system and yet the majority of the general public misunderstands it. It is important for those who currently work, and those who are planning to work, in the health care field to understand the underlying dynamic of the insurance process. The student is introduced to the concept of risk and the role of insurance in handling risk. Examines health care expenditures as an insurable event; health insurance and managed care as a form of risk handling.

PHS 833. Health Economics (3). An application of classical economic theories, principles and concepts to the traditional U.S. medical care. Both the traditional and unique determinants of demand and supply are considered with emphasis on the role of need for care, provider-induced demand, and health insurance. The legitimate role of government in health care is also considered.

PHS 838. Applied Data Analysis (3). Teaches: 1) the practical skills necessary to analyze and manage data using the SPSS software; 2) the application of statistical tools introduced in the MPH program’s introductory courses in biostatistics; and 3) an introduction to regression analysis.

PHS 841. Leadership and Change Agency in Public Health (3). Explores the essential leadership competencies and characteristics necessary to effectively promote innovation and facilitate adaptation in today’s complex and rapidly evolving health care system. Combines classic theory and cutting edge concepts to ground students in the principles which underpin the current emphasis on leaders as change agents. Explores and applies strategies for effective change in the thinking and behavior of people, the design and vision of organization, and the health and well being of communities. Emphasizes the generalizability of leadership principles across the various sectors of public health.

PHS 842. Public Health Applications to the World Wide Web (2). Documents the creation and evolution of the Internet and World Wide Web and applications that allow these tools to be of relevance to public health and preventive medicine in the community setting. There are no official prerequisites other than an understanding of biostatistics and familiarity with computer systems.

PHS 843. Health Program Planning (3). Development and practice of planning and evaluation skills through the development of a health program in a community of interest.

PHS 845. Coalitions in Health Care (3). Designed to familiarize students with the factors influencing successful collaboration in public health. Emphasizes the application of this material to the development of community-based coalitions/agencies/committees/partnerships. Course format includes lecture, group and individual examination of the literature, analysis of case studies, and fieldwork.

PHS 858. Long-Term Care Systems (3). Analyzes long-term care in the U.S. as a response to chronic illness and disability, emphasizing the diversity of long-term care systems addressing the needs of persons of all ages. Addresses system and organizational concerns affecting costs, outcomes and quality. Explicitly applies a trajectory model of chronic illness and disability, conceptualizing long-term care systems in their response to chronically ill and disabled individuals. Students are encouraged to have taken PHS 812 or to take it concurrently.

PHS 876. Directed Study (1–3). Individual study of the various aspects and problems within public health. Repeatable for credit with departmental consent. A maximum of 3 credit hours may count toward degree requirements. Prerequisites: faculty adviser and instructor’s consent.

School of Nursing (NURS)
Graduate Faculty

Professors: Donna Hawley (director of institutional research), Alicia Huckstadt (director of graduate program), Janice Riordan, Elaine Steinke,
Associate Professors: Mary Koch, CHP associate dean and chairperson), Betty Elder, Betty Smith-Campbell
Assistant Professors: Karen Hayes, Victoria Mostuck, Martha Shawver (senior associate provost for academic affairs and research)

Master of Science in Nursing
The program is individualized to meet the needs and professional goals of each student. The curriculum has been developed to accommodate part-time study (8 or fewer credit hours), as well as full-time study (9–12 credit hours). The purpose of the graduate program is to prepare advanced practitioners who function as clinical
nurse specialists, nurse practitioners, administrators, and educators.

Significant curriculum revisions are in process that affect nursing courses, hours, and degree requirements. Contact the School of Nursing for the latest information.

Admission Requirements

In addition to the general university requirements for admission to graduate studies (see the Admission to Graduate Study section for full details), the School of Nursing requires:

1. A bachelor’s degree with a major in nursing from a nationally accredited (NLN or CCNE) school. RN applicants with a degree in another discipline will be considered and counseled on an individual basis;
2. Admission to the Graduate School at Wichita State University;
3. A cumulative grade point average of 3.000 or higher in the following areas: the last 60 hours of undergraduate coursework; all undergraduate nursing courses; any graduate-level courses and in required MSN courses, if any; and, a 3.000 average in the following science courses: microbiology, anatomy/physiology, pathophysiology, and pharmacology (with grades of 2.000 or better in each science course);
4. School of Nursing approval;
5. Evidence of Registered Nurse licensure in Kansas;
6. Coverage by professional liability insurance in the minimum amount of $1/3 million individual/aggregate, to be renewed annually;
7. One year of nursing practice following professional licensure is highly recommended but not required;
8. Computer literacy including word processing, e-mail and Internet searches;
9. A clinical learning background check is required. The School of Nursing can provide details for obtaining the background check; and
10. Evidence of meeting the technical standards as identified by the School of Nursing graduate program.

Students may be admitted conditionally until all requirements for admission are completed.

Prerequisites: A recent course in statistics accepted by the School of Nursing and an undergraduate nursing research course are required. Prerequisite courses are not credited to the degree. Students who have not completed a prerequisite may be admitted conditionally and are allowed one year to complete it. Some graduate courses may not be available to students while completing the prerequisites.

Comprehensive Examination

A comprehensive written examination, thesis or research project is required of all graduate nursing students. The exam is completed within the student’s last two semesters.

Specializations Available

All students must apply to a specialization through the School of Nursing. Each specialization has unique admission requirements. Specialization applications and requirement information can be obtained from the School of Nursing graduate program office. Admission to the appropriate specialization is required prior to enrollment in specialization-specific courses. Students will be required to have their own PDAs during specialization clinical courses. They may contact the nursing graduate program office for details.

Clinical Nurse Specialist (CNS)

Adult Health and Illness

Nurse Practitioner (NP)

Acute Care

Family

Pediatrics

Psychiatric/Mental Health

Nurse Midwifery

Offered in collaboration with the University of Kansas.

Nursing and Health Care Systems Administration

(49 hrs)*

Dual Degree MSN and MBA (63 hrs); offered in collaboration with the W. Frank Barton School of Business.

Graduate Certificates (Post Masters)

Dual Degree for ARNPs

*Please contact the School of Nursing graduate program office for the most recent information on these programs.

Clinical Nurse Specialist (CNS)

Adult Health and Illness (Adult CNS) . . . . . . . . . . (49 hrs)

Core and preparatory courses

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<thead>
<tr>
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<th>Hours</th>
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<tbody>
<tr>
<td>NURS 701</td>
<td>Adv Health Assessment</td>
<td>2</td>
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<td>NURS 702</td>
<td>Adv Health Assessment Lab</td>
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<tr>
<td>NURS 703</td>
<td>Theoretical Foundations of Adv Nursing Practice</td>
<td>3</td>
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<td>HS 711</td>
<td>Pharmacological Mgmt of Acute &amp; Chronic Diseases</td>
<td>3</td>
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<td>NURS 715</td>
<td>Adv Nursing Practice Roles</td>
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<td>NURS 793</td>
<td>Adv Pathophysiology I</td>
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<td>NURS 801</td>
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<td>Evidence-Based Nursing Pract &amp; Outcomes of Care</td>
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<td>Evidence-Based Nursing Project II</td>
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Specialization courses

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<tr>
<td>NURS 834</td>
<td>Adult CNS Practicum I</td>
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</table>

Nurse Practitioner (NP)

Acute Care (ACNP) . . . . . . . . . . . . . . . . . . . . . . (49 hours)

Core and preparatory courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Hours</th>
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<td>NURS 703</td>
<td>Theoretical Foundations of Adv Nursing Practice</td>
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<tr>
<td>HS 711</td>
<td>Pharmacological Mgmt of Acute &amp; Chronic Diseases</td>
<td>3</td>
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<tr>
<td>NURS 715</td>
<td>Adv Nursing Practice Roles</td>
<td>1</td>
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<tr>
<td>NURS 793</td>
<td>Adv Pathophysiology I</td>
<td>4</td>
</tr>
<tr>
<td>NURS 801</td>
<td>Health Care Systems: Policy &amp; Politics</td>
<td>3</td>
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<tr>
<td>NURS 806</td>
<td>Evidence-Based Nursing Pract &amp; Outcomes of Care</td>
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</tbody>
</table>
### NURS 906 Transition to FNP Adv

- Core and preparatory courses
  - NURS 701 Adv Health Assessment ..........2
  - NURS 702 Adv Health Assessment Lab .......1
  - NURS 703 Theoretical Foundations of Adv Nursing Practice ..........3
  - NURS 715 Adv Nursing Practice Roles ......1
  - NURS 793 Adv Pathophysiology I ..........4
  - NURS 795 Applied Drug Therapy ..........3
  - NURS 801 Health Care Systems: Policy & Politics ..........3
  - NURS 806 Evidence-Based Nursing Practice & Outcomes of Care ..........3
  - NURS 826 Evidence-Based Nursing Project I ..........2
  - NURS 828 Evidence-Based Nursing Project II ..........2

### Specialization courses

- Practicum I ..........1
- Practicum II ..........1

### Comprehensive Examination

- Comprehensive Examination ..........0

### Family (FNP) (49 hours)

#### Core and preparatory courses

- NURS 701 Adv Health Assessment ..........2
- NURS 702 Adv Health Assessment Lab .......1
- NURS 703 Theoretical Foundations of Adv Nursing Practice ..........3
- NURS 715 Adv Nursing Practice Roles ......1
- NURS 793 Adv Pathophysiology I ..........4
- NURS 795 Applied Drug Therapy ..........3
- NURS 801 Health Care Systems: Policy & Politics ..........3
- NURS 806 Evidence-Based Nursing Practice & Outcomes of Care ..........3
- NURS 826 Evidence-Based Nursing Project I ..........2
- NURS 828 Evidence-Based Nursing Project II ..........2

#### Specialization courses

- NURS 728 Adv Practice Technology and Skills ..........3
- NURS 803 FNP Primary Care I ..........3
- NURS 804 FNP Primary Care Practicum I ..........4
- NURS 830 FNP Management & Clinical Application I ..........1
- NURS 838 Transition to FNP Adv Practice Role I ..........1
- NURS 903 FNP Primary Care II ..........3
- NURS 904 FNP Primary Care Practicum II ..........4
- NURS 905 FNP Management & Clinical Application II ..........2
- NURS 906 Transition to FNP Adv Practice Role II ..........1
- NURS 952 Adv Nursing Practice Preceptonship ..........3

#### Comprehensive Examination

- Comprehensive Examination ..........0

### Pediatric (PNP) (49 hours)

#### Core and preparatory courses

- NURS 701 Adv Health Assessment ..........2
- NURS 702 Adv Health Assessment Lab .......1
- NURS 703 Theoretical Foundations of Adv Nursing Practice ..........3
- NURS 715 Adv Nursing Practice Roles ......1
- NURS 793 Adv Pathophysiology I ..........4
- NURS 795 Applied Drug Therapy ..........3
- NURS 801 Health Care Systems: Policy & Politics ..........3
- NURS 806 Evidence-Based Nursing Practice & Outcomes of Care ..........3
- NURS 826 Evidence-Based Nursing Project I ..........2

#### Specialization courses

- NURS 728 Adv Practice Technology and Skills ..........3
- NURS 806 Evidence-Based Nursing Project I ..........2

### Psychiatric/Mental Health (PMHNP) (49 hours)

#### Core and preparatory courses

- NURS 701 Adv Health Assessment ..........2
- NURS 702 Adv Health Assessment Lab .......1
- NURS 703 Theoretical Foundations of Adv Nursing Practice ..........3
- NURS 715 Adv Nursing Practice Roles ......1
- NURS 793 Adv Pathophysiology I ..........4
- NURS 795 Applied Drug Therapy ..........3
- NURS 801 Health Care Systems: Policy & Politics ..........3
- NURS 806 Evidence-Based Nursing Practice & Outcomes of Care ..........3
- NURS 826 Evidence-Based Nursing Project I ..........2

#### Specialization courses

- NURS 728 Adv Practice Technology and Skills ..........3
- NURS 819 Foundations of Psychiatric Mental Health Nursing ..........3

### Nurse Midwifery

This specialization is offered in collaboration with the University of Kansas School of Nursing. Students apply to both WSU and KU. Graduates receive the MSN degree from WSU and a Certificate of Nurse Midwifery from KU.

#### Curriculum (49 hours)

- Total 28
  - NURS 701 Advanced Health Assessment ..........2
  - NURS 702 Adv Health Assessment Lab ..........1
  - NURS 703 Theoretical Foundations of Adv Nursing Practice ..........3
  - NURS 715 Adv Nursing Practice Roles ..........1
  - NURS 793 Adv Pathophysiology I ..........4
  - NURS 795 Applied Drug Therapy ..........3
  - NURS 801 Health Care Systems: Policy & Politics ..........3
  - NURS 806 Evidence-Based Nursing Practice & Outcomes of Care ..........3
  - NURS 826 Evidence-Based Nursing Project I ..........2
  - NURS 828 Evidence-Based Nursing Project II ..........2

#### Elective

- Comprehensive Examination ..........4

### Specialization courses (taken at KU)

- NURS 830 Care of Women in the Antepartal Period ..........2
- NURS 831 Care of Women in the Antepartal Period: Practicum ..........2
- NURS 832 Nurse Midwifery in the Neonatal Period w/Practicum ..........1
- NURS 835 Primary Health Care of Women Through the Lifespan ..........3
- NURS 836 Nurse Midwifery in the Intrapartal & Postpartal Period ..........3
- NURS 837 Nurse Midwifery in the Intrapartal & Postpartal: Practicum ..........2
- NURS 838 Primary Health Care of Women Through the Lifespan ..........2
- NURS 840 Care of Women Integration Practicum ..........4
Nursing and Health Care Systems Administration (ADMIN) (49 hours)
Please contact the School of Nursing graduate programs office for the most recent information regarding curriculum.

Dual MSN/MBA Degree
The School of Nursing and the W. Frank Barton School of Business offer a dual degree program in which both degrees are received. The 63-credit program includes a minimum of 27 credits in nursing, 33 credits in business administration and 3 credits in health care administration. Seeking these degrees separately would require 87–93 credit hours.

There are additional admission requirements for the Master of Business Administration portion of the dual degree
Admission to the MBA program is granted to students who show high promise of success in postgraduate business study and who hold a bachelor's degree from a regionally accredited institution. Although various criteria are considered in granting admission, special attention is given to the applicant's grade point average on academic work completed, and to their test score on the Graduate Management Admission Test (GMAT).

To be admitted, applicants must have 1,050 points based on the formula: 200 times a student's overall grade point average (GPA), plus the GMAT score; or 1,000 points based on 200 times the GPA in the last 60 hours of graduate and undergraduate work completed, plus the GMAT score.

Curriculum Notes
The prerequisites, MSN core curriculum and MBA background fundamentals are taken before the practicum courses and the required MBA courses. Practica should be planned late in the program. Either full- or part-time enrollment is possible.

Please contact the School of Nursing graduate programs office for the most recent information regarding curriculum.

Graduate Certificates (Post Master’s)
Registered Nurses with master's degrees (MN or MSN) from a nationally accredited (CCNE or NLN) master's program may be admitted to a certificate specialization in the graduate nursing program. Those requesting a clinical program must have a degree with a clinical emphasis. The following specializations will have prerequisites which must be fulfilled prior to acceptance.

Acute Care Nurse Practitioner Graduate Certificate (ACNP) .............22 hours
Course and experience prerequisites may be required. Please contact department for prerequisites.
NURS 840 Pathophysiology & Mgmt of Acute Care Problems I ..........3
NURS 842 Transition to the ACNP Adv. Practice Role I .............1
NURS 874 Acute Care Nurse Practitioner Practicum I .............4
NURS 909 Pathophysiology & Mgmt of Acute Care Problems II ..........3
NURS 910 ACNP Practicum II .............4
NURS 911 Transition to the ACNP Adv. Practice Role II .............1
NURS 912 Mgmt of the Acutely & Critically Ill Adult .............3
NURS 952 Adv. Nursing Practice Preceptorship .............3

Nursing and Health Care Systems Administration Graduate Certificate .............20 hours
Please contact the School of Nursing graduate programs office for the most recent information regarding curriculum.

Adult Health and Illness Clinical Nurse Specialist (CNS) Graduate Certificate .............22 hours
Course and experience prerequisites may be required. Please contact department for prerequisites.
NURS 723 Foundations of Nursing Education ..................3
NURS 834 Adult CNS Practicum I ..................4
NURS 866 Transition to the CNS Adv. Practice Role I ..................1
NURS 840 Pathophysiology & Mgmt of Acute Care Problems I ..........3
NURS 909 Pathophysiology & Mgmt of Acute Care Problems II ..........3
NURS 927 Transition to the CNS Adv. Practice Role II ..................1
NURS 928 Adult CNS Practicum II ..................4
NURS 952 Adv. Nursing Practice Preceptorship ..................3

Family Nurse Practitioner (FNP) Graduate Certificate .............22 hours
Course and experience prerequisites may be required. Please contact department for prerequisites.
NURS 803 FNP Primary Care I ..................3
NURS 804 FNP Primary Care Practicum I .............4
NURS 830 FNP Mgmt & Clinical App. I ..................1
NURS 838 Transition to FNP Adv. Practice Role I ..................1
NURS 903 FNP Primary Care II ..................3
NURS 904 FNP Primary Care Practicum II .............4
NURS 905 FNP Mgmt. & Clinical Application II ..................2
NURS 906 Transition to FNP Adv. Practice Role II ..................1
NURS 952 Adv. Nursing Practice Preceptorship ..................3

Pediatric Nurse Practitioner (PNP) Graduate Certificate .............22 hours
Course and experience prerequisites may be required. Please contact department for prerequisites.
NURS 846 PNP Mgmt & Clinical App. I ..................1
NURS 847 PNP Primary Care I ..................3
NURS 848 PNP Primary Care Practicum I .............4
NURS 850 Transition to PNP Adv. Practice Role I ..................1
NURS 915 PNP Primary Care II ..................3
NURS 916 PNP Primary Care Practicum II .............4
NURS 917 PNP Mgmt & Clinical App. II ..................2
NURS 918 Transition to PNP Adv. Practice Role II ..................1
NURS 952 Adv. Nursing Practice Preceptorship ..................3

Psychiatric/Mental Health Nurse Practitioner (PMHNP) Graduate Certificate (for non-Psych-MH CNS graduates) .............22 hours
Course and experience prerequisites may be required. Please contact department for prerequisites.
NURS 819 Foundations of Psychiatric/Mental Health Nursing .............3
NURS 822 Psychiatric/Mental Health Nursing Practicum I .............4
NURS 854 Diagnosis & Mgmt of Mental Disorders ..................3
NURS 856 Transition to PMHNP Adv. Practice Role I ..................1
NURS 921 Complex Issues in Psychiatric Mental Health Nursing .............3
NURS 922 Psychiatric Mental Health Nursing Practicum II .............4
NURS 923 Transition to PMHNP Adv. Practice Role II ..................1
NURS 952 Adv. Nursing Practice Preceptorship ..................3

Psychiatric/Mental Health Nurse Practitioner (PMHNP) Graduate Certificate (for Psych-MH CNS graduates) .............18 hours
Course and experience prerequisites may be required. Please contact department for prerequisites.
NURS 701 Adv. Health Assessment ..................2
NURS 702 Adv. Health Assessment/Lab ..................1
HS 710 Applied Clinical Pharmacology ..................3
(Some individuals may need NURS 795)
NURS 728 Adv. Practice Technology and Skills ..................3
NURS 793 Adv. Pathophysiology I* ..................4
Master of Science in Nursing Degree for ARNPs

An MSN degree in two Nurse Practitioner (NP) specializations is offered for those who hold current ARNP certification in the appropriate specialization.

The degree for ARNPs is offered in the following specializations: family nurse practitioner or pediatric nurse practitioner.

Admission requirements for entrance include the same requirements as the MSN program for those without ARNP certification as well as the following:

- BSN-prepared RN with ARNP certification in the specialization in which the degree is being sought;
- A college-level health assessment course is a prerequisite;
- An approved statistics course as a pre- or corequisite;
- Transcript or certification of completion of NP training; and
- Current ARNP certification in state of residence.

Significant curriculum revisions are in process that affect requirements for this degree. Contact the School of Nursing for the latest information.

Doctor of Nursing Practice

This program is intended to provide advanced education in many areas beyond that provided by the MSN program.

Some areas of advanced content are: critical thinking and leadership in the health care system, and health policy.

There are two entry points for this program. Those who have completed either the BSN or the MSN may apply.

Doctor of Nursing Practice (DNP) Degree—Post-baccalaureate

Admission Requirements

1. An approved-graduate level statistics course taken within the last six years;
2. A Bachelor of Science in nursing from a nationally accredited school (NLN or CCNE);
3. A GPA of 3.000 or higher in the following areas:
   a. Last 60 hours of undergraduate coursework
   b. All undergraduate nursing courses
   c. Any graduate-level courses taken
   d. The following four science courses taken with an overall GPA of at least 3.000 and no grade that generates less than 2.000 credit points per credit hour in any one course: anatomy/physiology, microbiology, pathophysiology, and pharmacology
4. There are two applications in the process, the Graduate School application and the School of Nursing. Both must be completed to be considered;
5. All students will request entrance to a specific specialization upon application. Please see choices below;
6. Evidence of license as a registered nurse in Kansas;
7. Coverage by professional liability insurance. CNS and NP students must have NP student coverage prior to enrollment in practicum coursework. Minimum coverage required: $1,000,000 single incident/$3,000,000 aggregate;
8. Computer literacy is an expectation of the graduate nursing program. Skills should include: word processing, e-mail, file attachments, and internet searches. If courses require Blackboard, students are highly encouraged to complete the Blackboard orientation. Students may elect to take Personal Computing 105, or another basic computer skills course, to fulfill the computer literacy expectation; and
9. Technical standards must be met.

Credit Hours

Students who enter with the BSN degree complete a minimum of 74 credit hours for the entire DNP program. An MSN degree is not awarded.

Students who enter with the MSN degree complete a minimum of 29 credit hours for the DNP degree.

Final Project

Students complete a project within the DNP program culminating with the residency course. (See page 118, DNP Project)

Specializations

All students request entrance to a specific specialization upon application. The internal School of Nursing admission process includes this placement. Admission into a specialization for DNP applicants with a BSN degree is maintained as students successfully complete coursework on their plan of study. Those who do not successfully complete coursework compatible with their plan of study are not continued in the DNP program. Admission for MSN candidates is to the clinical (or administrative) specialization area in which their MSN was completed. Any exception is determined by individual review.

Students choose from two foci: individual/family, or aggregate/systems/organization. Individual/Family Focus Specialties:

- Clinical Nurse Specialist
  - Adult Health and Illness
  - Nurse Practitioner
  - Acute Care
  - Family
  - Pediatrics
- Psychiatric-Mental Health

Aggregate/Systems/Organizational Focus Speciality:

- Nursing Administration and Executive Nurse Leadership (Please contact the School of Nursing graduate programs office for the most recent information regarding this specialization.)

Clinical Nurse Specialist

Adult Health and Illness (Adult CNS) (74 hrs)

Care and specialization preparatory courses

- Ad hoc—Nursing Assessment
- Ad hoc—Nursing Research

Credit Hours

NURS 701 Adv. Health Assessment 2
NURS 702 Adv. Health Assessment Lab 1
NURS 703 Theoretical Foundations of Advanced Nursing Practice 3
NURS 715 Advanced Nursing Practice Roles 1
NURS 793 Advanced Pathophysiology I 4
HS 710 Applied Clinical Pharmacology 3
HS 711 Pharmacological Mgmt of Acute & Chronic Diseases 3
NURS 801 Health Care Systems: Policy and Politics 3
NURS 806 Evidence-Based Nursing Pract and Outcomes of Care 3
NURS 824 Advanced Pathophysiology II 2
NURS 826 Evidence-Based Nursing Project I 2
NURS 828 Evidence-Based Nursing Project II 2
NURS 901 Organizational Systems & Leadership 3
NURS 902 Population & Social Determinates of Health 3

Specialization courses

NURS 723/724 Foundations of Nursing Education/Practicum or
NURS 775/776 Health Care Info Systems/Practicum 6

Practicum

NURS 834 Adult CNS Practicum I 4
NURS 840 Pathophysiology & Mgmt of Acute Care Problems I 3
NURS 866 Transition to the CNS Adv. Practice Role I 1
NURS 909 Pathophysiology & Mgmt of Acute Care Problems II 3
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<td>NURS 960</td>
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### Family Nurse Practitioner (FNP) (74 hrs)

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<td>NURS 715</td>
<td>Adv. Nursing Practice Roles</td>
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<tr>
<td>NURS 793</td>
<td>Advanced Pathophysiology I</td>
</tr>
<tr>
<td>HS 710</td>
<td>Applied Clinical Pharmacology</td>
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<tr>
<td>HS 711</td>
<td>Pharmacological Mgmt of Acute &amp; Chronic Diseases</td>
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<td>NURS 801</td>
<td>Health Care Systems: Policy and Politics</td>
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<td>NURS 806</td>
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<td>Evidence-Based Nursing Project I</td>
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<td>NURS 828</td>
<td>Evidence-Based Nursing Project I</td>
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<tr>
<td>NURS 901</td>
<td>Organizational Systems &amp; Leadership</td>
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<tr>
<td>NURS 902</td>
<td>Population &amp; Social Determinates of Health</td>
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#### Specialization courses

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<tr>
<td>NURS 803</td>
<td>FNP Primary Care I</td>
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<td>NURS 804</td>
<td>FNP Primary Care Practicum I</td>
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<td>NURS 830</td>
<td>FNP Management &amp; Clinical Application I</td>
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<td>NURS 838</td>
<td>Transition to FNP Advanced Practice Role I</td>
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<td>NURS 959</td>
<td>Evidence-Based Nursing Project III</td>
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<td>NURS 960</td>
<td>Residency</td>
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#### Capstone Courses

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<td>Evidence-Based Nursing Project III</td>
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<tr>
<td>NURS 960</td>
<td>Residency</td>
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### Pediatric Nurse Practitioner (PNP) (74 hrs)

#### Core and specialization preparatory courses

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<tbody>
<tr>
<td>NURS 701</td>
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<td>Organizational Systems &amp; Leadership</td>
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<td>NURS 902</td>
<td>Population &amp; Social Determinates of Health</td>
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### Nurse Practitioner

**Acute Care Nurse Practitioner (ACNP) (74 hrs)**

#### Core and preparatory courses

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<td>NURS 904</td>
<td>FNP Primary Care Practicum II</td>
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<td>NURS 905</td>
<td>FNP Management &amp; Clinical Application II</td>
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<td>NURS 906</td>
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#### Capstone Courses

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### Health Professions

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<td>CESP 728</td>
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<td>NURS 846</td>
<td>PNP Management and Clinical Application I</td>
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<td>NURS 847</td>
<td>PNP Primary Care I</td>
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<td>NURS 848</td>
<td>PNP Primary Care Practicum I</td>
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<td>NURS 850</td>
<td>Transition to PNP Advanced Practice Role I</td>
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### Psychiatric/Mental Health Nurse Practitioner (PMHNP) (74 hrs)

#### Core and specialization preparatory courses

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<td>NURS 701</td>
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<td>NURS 702</td>
<td>Adv. Health Assessment Lab</td>
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<tr>
<td>NURS 703</td>
<td>Theoretical Foundations of Advanced Nursing Practice</td>
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<td>NURS 715</td>
<td>Advanced Nursing Practice Roles</td>
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<td>NURS 793</td>
<td>Advanced Pathophysiology I</td>
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<td>HS 710</td>
<td>Applied Clinical Pharmacology</td>
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<tr>
<td>NURS 801</td>
<td>Health Care Systems: Policy and Politics</td>
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<td>NURS 806</td>
<td>Evidence-Based Nursing Pract and Outcomes of Care</td>
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<td>NURS 824</td>
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<td>NURS 828</td>
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NURS 901  Organizational Systems & Leadership ............................3
NURS 902  Population & Social Determinates of Health .................3

Specialization courses
NURS 728  Adv. Practice Technology and Skills ..........................3
NURS 854  Diagnosis and Management of Mental Disorders ............3
(Must be taken prior to NURS 819)
NURS 819  Foundations of Psychiatric/Mental Health Nursing ..........3
NURS 822  Psychiatric/Mental Health Nursing Practicum I .................4
NURS 856  Transition to PMHNP Adv. Practice Role I ......................1
NURS 921  Complex Issues in Psychiatric/Mental Health Nursing .......3
NURS 922  Psychiatric/Mental Health Nursing Practicum II .................4
NURS 923  Transition to PMHNP Adv. Practice Role II .....................1
NURS 952  Advanced Nursing Practice Preceptorship .......................3
Graduate Nursing Elective ..................................................3

Capstone Courses
NURS 956  Practice Management ...........................................2
NURS 959  Evidence-Based Nursing Project III ..............................3
NURS 960  Residency ......................................................6

Aggregate/Systems/Organizational Focus
Nursing Administration & Executive Leadership (74 hrs)
Please contact the School of Nursing graduate programs for the most recent information on this specialization

Elective coursework is available in many topic areas, including education, information systems, human lactation, genetics, alternative and complimentary health care and applied physiology/fetal anatomy. Students should see their advisor for assistance with elective choices.

Post Master's
Doctor of Nursing Practice (DNP) Degree—Post-Master's

Admission Requirements
1. A recent graduate-level statistics course (acceptable to WSU) is required;
2. A nursing master's degree from an accredited school, with a GPA of 3.250 or higher in all master's work;
3. Individual/Family focus applicants are required to:
   a. Present proof of ARNP licensure in Kansas, and
   b. Present proof of, or eligibility for, national certification as a nurse practitioner or clinical nurse specialist;
4. Some latitude may be given in the following GPA requirements on an individual basis (3.000 or higher in the following areas):
   a. Last 60 hours of undergraduate coursework
   b. All undergraduate nursing courses
   c. Any graduate-level courses taken
   d. The following four science courses taken with an overall GPA of at least 3.000 and no grade that generates less than 2.000 credit points per credit hour in any one course: anatomy/physiology, microbiology, pathophysiology, and pharmacology
5. There are two applications in the process, the graduate School and the School of Nursing. Both must be completed to be considered;
6. Admission for post-master's applicants will be to the practice specialization area in which their nursing master's degrees were completed.

Individual/Family Focus ...................................................(22 hrs)

Care and specialization preparatory courses
Pharmacology*:
- ACNP, Adult CNS and PMHNP:
  - HS 711  Applied Clinical Pharma ....................3
Other specializations*:
- HS 711  Pharmacological Mgmt of Acute & Chronic Diseases ........3
NURS 824  Advanced Pathophysiology II ....................2
NURS 899A  Special Topics: Health Care Sys Policy & Politics Update ........1
NURS 899B  Special Topics: Evidence-Based Nursing Practice Update ........1
NURS 889C  Special Topics: Management of Care Update .................2
NURS 901  Organizational Systems & Leadership .........................3
NURS 902  Population & Social Determinates of Health .................3
NURS 956  Practice Management ...........................................2
Graduate Nursing Elective ..............................................3

Research Course
NURS 959  Evidence-Based Nursing Project III ..............................3

Capstone Course
NURS 960  Residency ......................................................6

* Count either HS 710 or 711 (not both) in the total hours required.

DNP Project
Students complete an evidenced-based project that stems from a series of courses (Evidence Based Nursing Practice and outcomes of Care; Evidence-Based Practice Nursing Project I & II). Students work collaboratively with at least one graduate nursing faculty member who is chairperson of their committee and one other graduate faculty member to identify an evidence-based practice problem and plan the implementation to address the problem. Successful defense of the evidence-based project proposal is the expected outcome within the Evidence-Based Project III course. After successful completion and defense of Evidence-Based Project III proposal, the candidate may enroll in residency hours. The residency allows the student to complete and disseminate the results of the project, and develop a portfolio documenting practice scholarship. The residency hours may be taken in 2-, 4-, or 6-hour increments and may be repeated until requirements are met. The candidate completes an oral defense of the project at the end of the residency.

Courses for Graduate/Undergraduate Credit
NURS 505. Directed Study in Nursing (1–4). Elective. Individual study of the various aspects and/or problems of professional nursing. Repeatable. Prerequisite: departmental consent.

NURS 506. Transcultural Nursing (3). Transcultural nursing is the provision of nursing care sensitive to the needs of individuals, families, and groups. Since health and illness are strongly influenced by an individual's cultural background, an awareness of the cultural aspects of lifestyle, health beliefs, and health practices enhance nursing assessment and care. Examines the cultural influences on health and illness in a variety of groups, emphasizing developing more sensitive and effective nursing care. Prerequisite: admission to School of Nursing or instructor's consent.

NURS 530. Concepts of Loss (3). Elective. Strategies for helping clients and families cope with broad aspects of loss, from temporary transient illness to death. Includes human response, through the life span, to changed body image, disability and disfigurement, chronic illness, dying, and death. Includes grief and mourning. Open to non-nursing majors.

NURS 531. Nursing and Computer Technology (3). Focuses on basic terminology and use of computer software for nursing education, practice, and administration. Opportunity for hands-on experience with microcomputers. Prerequisite: admission to the nursing program or instructor's consent. Previous knowledge of computers or computer technology is not required.

NURS 543. Women and Health Care (3). Cross-listed as WOMS 543. Examines the historical development of the women's health movement, focuses on current issues relevant to women and health care, and explores the roles of women in the health care system and as consumers of health care. Examines self-care practices
of women and studies ways to promote positive health practices. Open to non-nursing majors.

NURS 566. Perspectives on Self-Help Groups (3). Cross-listed as PSY 566 and SCWK 566. Provides an interactive format that constitutes a community resource for health and human service professionals and promotes an interdisciplinary understanding of the nature and diversity of self-help groups for persons with virtually any health problem or personal issue. Reviews contemporary theory and research, explaining the attractiveness and effectiveness of self-help groups. Panels of support group members share their experiences with self-help groups on such topics as addiction, cancer and other illnesses, eating disorders, bereavement, mental illness, and parenting.

NURS 567. Psychology of Helping Relationships (3). Cross-listed as PSY 506 and SOC 506. Introduces students to a psychological perspective on helping relationships that will be useful in both practice and research. Topics covered include the definition of relationship, and identification of the ways in which the roles of helper and help-seeker can be structured to maximize effectiveness: e.g. power, distance, similarity, and reciprocity. Relationships of interest include counseling and psychotherapy, nursing and doctoring, family caregiving, mentoring, self-help/mutual aid, and volunteering. The emerging topic of "relationship-centered care models" in the education of health care professionals is discussed. Prerequisite: 6 hours in psychology including PSY 111 or instructor's consent.

NURS 701. Advanced Health Assessment (3). Designed to assist students to refine history taking, psychosocial assessment, and physical assessment skills. Focuses on assessment of individuals throughout the life span. Emphasis is placed on detailed health history taking, differentiation, interpretation, and documentation of normal and abnormal findings. Course includes lecture, discussion, and integrative history-taking and physical assessment assignments. Prerequisite: admission to graduate nursing program. May be taken concurrently with or prior to NURS 702.

NURS 702. Advanced Health Assessment Laboratory (1). Companion course for NURS 701. Apply history-taking and assessment skills within a laboratory setting. Emphasizes differentiation, interpretation, and documentation of normal and abnormal findings. Requires a complete physical and history examination of a client. Prerequisite: admission to graduate nursing program. May be taken concurrently with, or within one year of completion of, NURS 701.

NURS 703. Theoretical Foundations of Advanced Nursing Practice (3). Emphasizes the role of theory in developing knowledge-based advanced nursing practice. Relationships among theory, research and practice are addressed. The application of selected theories, models and frameworks to advanced practice nursing is discussed. Prerequisite: admission to graduate nursing program.

NURS 705. Scientific Inquiry II (3). Builds on NURS 703. Discusses the research process in relationship to concepts, frameworks/theories. Explores various methodological approaches to research. Considers current issues in nursing research. Demonstrates the research process in a preliminary proposal related to student's practice area. Prerequisites: NURS 703 or departmental consent and admission to graduate nursing program.

NURS 707. Alternative and Complementary Health Care (3). Analyzes the theoretical and empirical basis for various alternative and complementary modalities. Includes an exploration of issues involved with the use of specific modalities within today's health care environment. Research-based discussion focuses on how to best prepare the health care professional to provide guidance to a client and the family to best achieve a physiological, mental, emotional, and spiritual state most responsive to therapeutic interventions. Emphasizes total evaluation and support of health influences on lifestyle, environment, culture, and other cognitive, safety and affective factors. Open to non-nursing majors.

NURS 715. Advanced Nursing Practice Roles (1). Designed for the student preparing for advanced practice nursing. The historical development of the advanced practice role, as well as current and future professional and legal descriptions of advanced practice nursing roles is explored. Prerequisite: admission to graduate nursing program.

NURS 718. Advanced Technologies (2). Focuses on application of clinical skills and interpretation of technologies used in a variety of clinical settings. Nurse practitioner students practice these skills in laboratory and/or clinical settings. Prerequisites: admission to one of the NP specializations and departmental consent. Enrollment is limited.

NURS 720. Human Lactation (3–4). For the graduate student preparing for practice as a lactation consultant. Provides an in-depth focus on the anatomical and physiological basis of lactation and breastfeeding. Explores factors that impact maintenance of health during lactation and clinical decisions for disease prevention. Addresses preparation for lactation consultant certification. Students work on case studies, develop a paper for publication, and take a final examination via the Internet. Open to non-nursing majors. Prerequisite: admission to graduate program.

NURS 723. Foundations of Nursing Education (3). Assists the student to explore theoretical and practical aspects of curriculum development and teaching of nursing in higher education and continuing education. Prerequisite: departmental consent.

NURS 724. Nursing Education Practicum (3). Students, under professional guidance, become directly involved in clinical and classroom teaching, curriculum development and participation in other faculty functions in higher education and continuing education, or patient education. A seminar and directed observation of a master teacher accompanies the field experience. Repeatable for a total of 6 credits. Prerequisites: departmental consent. Prereq: or coreqquisite: NURS 723.

NURS 726. Common Dermatological Conditions in Primary Care (1–3). Interactive online course guides students through an instructional program with a profile of common dermatological conditions encountered in primary care. Information is presented in brief case scenarios; students identify the condition. Resource links are available for in-depth study of each condition. For clinical use, patient education links are provided. Cases give the didactic information needed to make clinical decisions. Prerequisite: senior rule or admission to the Graduate School or instructor's consent.

NURS 727. Low Back Pain (1–3). Interactive online course guides students through an instructional program based on the low back pain guidelines from the Agency for Health Care Policy and Research. Case study format stimulates critical thinking. Linked information gives information needed to make clinical decisions. Prerequisite: senior rule or admission to the Graduate School or instructor's consent.

NURS 728. Advanced Practice Technology and Skills (3). Focuses on application of clinical skills, advanced health assessment, and interpretation of technologies used in a variety of clinical settings. Students practice these skills in laboratory and clinical settings. Students practice history-taking and physical examination, with emphasis on differentiation, interpretation and documentation of normal and abnormal findings. A 40-hour precepted experience is included.

NURS 731. Psychopharmacology (3). Basic brain biology, brain disorders and psychopharmacology are reviewed as a basis for assessment and administration of psychopharmacologic medications and education of clients. Prerequisite: admission to graduate program.

NURS 733. Diabetes Mellitus Nursing (3). Exploration of clinical theories; identifies and studies appropriate nursing systems for clients with diabetes mellitus. Emphasizes attaining and maintaining optimal levels of functioning and the psychological adjustment of the client and family to a potentially devastating disease. Open to non-nursing majors.

NURS 734. Diabetes Mellitus Nursing Practicum (3). An intensive clinical experience; the student studies, designs, and implements nursing systems for individuals or groups in the area of diabetes mellitus nursing management. A weekly one-hour seminar accompanies the practicum. Open to non-nursing majors.

NURS 750. Workshops in Nursing (1–4). An opportunity for intensive study of special topics related to nursing practice, education, or research. Open to non-nursing majors.

NURS 757. Teaching Strategies for Nursing Education (3). Analysis of teaching strategies for the nurse educator to accommodate the changing health care scene. Teaching methods, including technology, appropriate for a variety of learners and learning environments are discussed. Roles of the nurse educator across the scope of learning environments are investigated: nursing education, in-service, and patients/clients/families. Current issues and trends influencing nursing education are explored. The course focuses on the use of research-based evidence to guide teaching strategies. Pre- or corequisite: NURS 723. May be taken by graduate nursing students or undergraduate nursing students with senior standing.

NURS 775. Health Care Information Systems (3). Examines information systems as they relate to health care. Analyzes information systems in clinical management, administration, education, and research. Emphasizes issues surrounding information systems and hands-on experience with selected health care information management exercises.
NURS 776. Health Care Information Systems Practicum (3). Provides an individualized opportunity to apply the concepts/theories of information systems to a health care setting. Includes analyzing existing information programs, identifying applications for automation, and undertaking small-scale development efforts. Prerequisite: NURS 775.

NURS 781. Pathophysiology for Acute and Critical Care (3). Examines pathophysiological concepts relevant to acute and critical care nursing practice. Explores the scientific knowledge base for selected clinical problems in acute care. Emphasizes pathophysiological mechanisms of disease and the relevance to clinical decision making. Prerequisite: admission to graduate program.

NURS 783. Assessment in Psychiatric Mental Health Nursing (3). For the student preparing for advanced practice in psychiatric mental health nursing. Explores current diagnostic issues in psychiatric nursing practice. Emphasizes application of current biological, psychological, social, and other relevant theories and knowledge within the nursing and related fields to the assessment and planning of interventions for psychiatric clients. Prerequisite: admission to graduate program.

NURS 786. Advanced Health Assessment Practicum (2). A concentrated assessment practicum focusing on application of knowledge from advanced health assessment courses. Students apply history-taking and assessment skills in a specified setting. Emphasizes differentiation, interpretation, and documentation of normal and abnormal findings. Graded S/U. Prerequisites: NURS 701, 702, and departmental consent and admission to one of the NP specializations.

NURS 791. Special Studies in Nursing (1–6). Students engage in extensive study of particular content and skills directly or indirectly related to nursing practice. Repeatable. Open to graduate or undergraduate students. Prerequisite: departmental consent.

NURS 793. Advanced Pathophysiology I (4). Explores in-depth scientific knowledge base relevant to selected pathophysiological states confronted in advanced nursing practice. Provides the basis for the foundation of clinical decisions related to diagnostic tests and the initiation of therapeutic regimens. Age-specific and developmental alterations are correlated with clinical diagnosis and management. Application is made through age-appropriate examples and case studies. Prerequisites: admission to graduate nursing program or instructor's consent.

NURS 798. Applied Drug Therapy (3). Discusses the clinical application of specific categories of drugs commonly encountered in primary care settings. Explores the use of protocols, prescription writing, and the ethical/legal and economic issues surrounding the advanced nurse's role in prescribing and monitoring pharmacologic therapies in the ambulatory setting. Discusses factors such as age-appropriate content related to pharmacokinetics, dosages, expected outcomes, and side effects of the drugs. Addresses first-line versus second line drugs, alternate drugs, drug interactions, adjusting drug dosages, patient education, and compliance issues related to drug therapy. Explores the nurse's role and responsibility related to data collection, problem identification, and consultation with the physician. Application is made through age-appropriate case studies. Prerequisites: admission to graduate nursing program and departmental consent.

NURS 796. Nursing Practicum in Special Settings (1–6). Opportunity for directed practice in various settings including clinical specialties, nursing administration, nursing education, and consultation. Prerequisite: departmental consent.

NURS 799. Directed Readings in Nursing (1–2). Students engage in critical search of the literature in areas related to the profession and practice of nursing. Prerequisite: departmental consent.

Courses for Graduate Students Only

NURS 801. Health Care Systems: Policy and Politics (3). Designed to provide an overview of policies that make up the U.S. health system, and the influence policy has on advanced practice nursing and health care. Focuses on how to analyze policies relevant to advanced practice nurses and advocacy strategies, particularly politics, to influence policy implementation and evaluations. Prerequisite: admission to the graduate nursing program; Pre- or corequisite: NURS 715.

NURS 803. FNP Primary Care I (3). Focuses on common health problems seen in individuals and families throughout the life span. Emphasis on applications of research and theory-based interventions appropriate for management by advanced registered nurse practitioners. Emphasizes strategies and protocols to manage common problems in urban and rural patients, interventions to restore individual and family levels of pre-illness health, and positive behaviors. Prerequisites: NURS 728, and admission to the FNP specialization. Corequisites: NURS 804, 830, 838.

NURS 804. FNP Primary Care Practicum I (4). Concentrated clinical practicum in a primary care setting that addresses individuals and families throughout the life span within the context of the community. Theory and research used in clinical settings. Health promotion, maintenance, and prevention interventions emphasized. Prerequisites: NURS 728, and admission to the FNP specialization. NURS 703. Corequisites: NURS 805, 830, 838.

NURS 805. Health Promotion through the Life Span (3). Focuses on the wellness of individuals and families through the life span seeking to maintain or improve health and prevent illness. Interventions reflect a preventative framework, enhanced by theory and research, that provides an understanding of health and lifestyle behaviors. Prerequisite: NURS 703. Pre- or corequisite: NURS 705.

NURS 806. Evidence-Based Nursing Practice and Outcomes of Care (3). Evidence-based practice is the integration of the best research evidence with clinical expertise and patient values to facilitate clinical decision making. Focuses on identifying and evaluating evidence for its relevance in nursing practice. Prerequisite: admission to the graduate nursing program. Pre- or corequisite: NURS 703 and 715 or departmental consent.

NURS 808. Advanced Role Practicum (3–6). Prepares the student for advanced nursing practice. An intensive practicum experience; the student works with an advanced nurse practitioner in a selected clinical setting. Emphasizes role development, case management and analysis of strategies to improve nursing practice. Prerequisites: all core courses, NURS 703, 795 or HS 711, pathophysiology (NURS 781, 783 or 793) and all other clinical courses in the specialization.

NURS 809. Primary Care II: Management of Complex Health Problems through the Life Span (3). Focuses on complex problems seen in individuals and families through the life span. Stresses applications of current research and theory-based interventions appropriate for management by advanced registered nurse practitioners. Emphasizes strategies and protocols to manage complex patient problems in urban and rural patients, interventions to restore individual and family levels of pre-illness health, including secondary and tertiary prevention. Prerequisites: NURS 703, 803, 804 and admission to the FNP specialization. Corequisite: NURS 904.

NURS 810. Primary Care II: Practicum (4). Emphasizes assessment and management of common health problems across the life span, based upon knowledge of theory and research. Primary care clients with common conditions affecting major body systems assessed and managed. Weekly seminars focus upon analysis and evaluation of clinical situations and cases. Prerequisites: admission to the FNP specialization, NURS 703. Corequisite: NURS 903.

NURS 811. Foundations of Nursing and Health Care Systems Administration (3). Assists students in acquiring conceptual and practical knowledge of the theories, conceptual models, and research that serve as a basis for the design and administration of health care organizations. Attention is paid to the operation of these theories in an environment of rapidly changing technology, financial incentives, and political forces, workforce expectations, and interpersonal and organizational interdependencies. Prereq- or corequisites: NURS 703, 715 826, or instructor's consent.

NURS 812. Nursing and Health Care Systems Administration Practicum (3). Practicum in a health care setting; students, under professional guidance, become directly involved in existing leadership, administrative, and management systems. Types of experience may include roles in nursing service administration, nursing education, mid-level nursing administration/management, staff development, community health, or other related area as arranged. Repeatable for credit up to a maximum of 6 hours. (180 practice hours for 3 credit hours.) Pre- or corequisites: NURS 811 or 827, 868.

NURS 819. Foundations of Psychiatric/Mental Health Nursing (3). Focuses on common mental health problems found in individuals and families throughout the life span. Emphasis on application of theory-based interventions appropriate for management of mental disorders by advanced registered nurse practitioners. Prerequisites: all core courses, NURS 854. Corequisites: NURS 822, 856.

NURS 821. Thesis (1–6). The student, in conjunction with the academic adviser and a three-member thesis committee, designs and conducts a formal research project. Graded S/U only. Prerequisites: admission to graduate nursing program and departmental consent, NURS 703.

NURS 822. Psychiatric/Mental Health Nursing Practicum I (4). Intensive clinical experience in which students plan, implement, and evaluate nurse-therapist strategies with adult psychiatric patients. Emphasis is on
the performance of individual psychotherapy as well as psychiatric assessment which includes interpretation of relevant data, differential diagnosis, and development and implementation of treatment plans. Appropriate interventions to promote the therapeutic process are emphasized. Prerequisites: all core courses and NURS 854. Corequisites: NURS 819, 856.

NURS 823. Graduate Project: Alternative to Thesis (1–3). An opportunity to develop and pursue a scholarly project other than a thesis. This may take the form of a position paper, a historical study, a philosophical paper or project other than a thesis. This may take the form of a position paper, a historical study, a philosophical paper or project other than a thesis. Prerequisites: all core courses and NURS 854. Graded S/U only. Prerequisites: admission to graduate nursing program, departmental consent and 12 hours of graduate coursework, including NURS 703, 705.

NURS 824. Advanced Pathophysiology II (2). Analyzes the cellular and molecular pathophysiology and management of health problems through the life span. Emphasis is placed on the scientific underpinnings used to enhance clinical decision-making skills including differentiation of disease states. The major themes address normal physiology, pathophysiology, assessment and evaluation of disease states. Prerequisites: admission to DNP completion of at least one clinical course in specialty area.

NURS 825. Independent Study (1–6). Provides opportunity for the student to develop, in collaboration with a school faculty member, objectives and protocols for independent work related to the practice of nursing. Repeatable up to 6 credit hours. Prerequisites: admission to graduate nursing program and departmental consent, NURS 703.

NURS 826. Evidence-Based Nursing Project I (2). Focuses on problem identification for a nursing practice issue. The evidence is evaluated through literature search and critique. Evidence is summarized in a paper suitable for publication. Prerequisite: NURS 806 or departmental consent.

NURS 827. Resource Management in Nursing (3). Focuses on the assessment of human and material resources and informational systems needed to manage nursing care delivery. Nurse scheduling, budgeting for nursing services, patient classification systems, costing out of nursing services, information management in nursing and program and strategic planning and marketing are emphasized. Prerequisites: NURS 703, 715, 806, or instructor's consent.

NURS 828. Evidence-Based Nursing Project II (2). Management of critical data including data analysis techniques with spreadsheet and statistical manipulation. Students use existing data to determine health care outcomes and to evaluate delivery of care. Extensive computer use in laboratory setting with technical support. Computer literacy is expected. Prerequisite: NURS 826 or departmental consent.

NURS 830. FNP Management and Clinical Application I (1). Students engage in extensive clinical case discussion emphasizing pathophysiology principles and clinical management of acute and chronic health problems across the life span. Emphasis is on incorporation of theory and evidence-based practice in clinical decision making and problem solving while providing cost-effective care. Prerequisites: NURS 728 and admission to the FNP specialization. Corequisites: NURS 803, 804, 838.

NURS 832. Pediatric and/or Women's Health Nursing Practicum I (3). An intensive clinical experience. Focuses on the process of systematic development of psychosocial and health assessment of individuals within a family system. Experiences based on the student's clinical interests. Prerequisite: all core courses, NURS 703. Pre- or corequisite: CESP 728.

NURS 834. Adult CNS Practicum I (4). An intensive clinical experience in which the student is expected to design, implement and evaluate nursing care for adults. Specialized areas of study are selected and may involve health promotion, health maintenance or illness care of acutely or chronically ill adults. Corequisites: NURS 840 and 866.

NURS 836. Pediatric and/or Women's Health Nursing Practicum II (3). An intensive clinical experience; the student analyzes, prioritizes and designs therapeutic interventions in the management of common health problems affecting individuals and family systems. Experiences based on the student's clinical interests. Prerequisites: all core courses, NURS 703, 805. Pre- or corequisite: NURS 853.

NURS 838. Transition to FNP Advanced Practice Role I (1). Focuses on the application of theoretical models used in practice, the role of the FNP, primary care office practice issues, and case scenario presentations with interactive discussions based on use of established protocols and guidelines. Topics of presentations are guided by current lecture material in Primary Care I. Prerequisites: NURS 728 and admission to the FNP specialization. Corequisites: NURS 803, 804, 830.

NURS 839. Management of Acute and Chronic Health Problems of the Adult (3). Examines clinical concepts and issues related to major disruptions in the health status of adults. Emphasis is placed on assessment, measurement and interventions related to acute and chronic health problems. Prerequisites: all core courses, NURS 703, 781, 805 and HS 711.

NURS 840. Pathophysiology and Management of Acute Care Problems I (3). The first of two courses that examine pathophysiology and management of acute, multisystem health problems in adults. Emphasis is on the scientific underpinnings for clinical decision making and practice issues. Major themes address normal physiology, pathophysiology, assessment, diagnosis, and management of acute, critical, and exacerbation of chronic disease states. Health promotion and disease prevention are emphasized. Prerequisites: NURS 703 and admission to ACNP or Adult CNS specialization.

NURS 842. Transition to the ACNP Advanced Practice Role I (1). Focuses on the application of theoretical models of practice, ACNP role, evidence-based nursing practice, outcomes of care, and practice issues. Case discussions emphasize the application of physiologic principles and clinical management of acute, critical, and exacerbation of chronic health problems. Corequisites: NURS 840 and 874.


NURS 844. Psychiatric/Mental Health Nursing Practicum II (3). An intensive clinical experience; the student analyzes group processes and dynamics, initiates and evaluates therapeutic strategies. Prerequisites: NURS 703, 819, 822. Corequisite: NURS 921.

NURS 846. PNP Management and Clinical Application I (1). Students engage in extensive clinical case discussion emphasizing pathophysiology principles and clinical management of acute pediatric health problems. Emphasis is on incorporation of theory and evidence-based practice in clinical decision making and problem solving while providing cost effective care. Prerequisites: NURS 728 and admission to the PNP specialization. Corequisites: NURS 847, 848, 850.

NURS 847. PNP Primary Care I (3). Focuses on common health problems found in individuals and families during the infant, childhood, and adolescent years. Emphasis is on applications of research and theory-based interventions appropriate for management by advanced registered nurse practitioners. Emphasizes strategies and protocols to manage common problems in urban and rural patients, interventions to restore individual and family levels of pre-illness health, and positive behaviors. Prerequisites: NURS 728, and admission to the PNP specialization. Corequisites: NURS 846, 847, 850.

NURS 848. Primary Care Practicum I (4). Concentrates on the practice of pediatric primary care that addresses children and their families within the context of the community. Theory and research are used in clinical settings. Health promotion, maintenance, and prevention interventions are emphasized. Prerequisites: NURS 728, and admission to the PNP specialization. Corequisites: NURS 846, 847, 850.

NURS 849. Nurse Practitioner Preceptorship (3 or 6). A concentrated clinical practicum in an acute or primary health care setting that addresses children and their families within the context of the community. Theory and research are used in clinical settings. Health promotion, maintenance, and prevention interventions are emphasized. Prerequisites: NURS 728, and admission to the PNP specialization. Corequisites: NURS 846, 847, 850.

NURS 850. Transition to PNP Advanced Practice Role I (1). Focuses on the role of the Pediatric Nurse Practitioner in pediatric primary care practice. Topics of presentations are guided by current lecture material in PNP Primary Care I. Prerequisites: NURS 728 and admission to the PNP specialization. Corequisites: NURS 846, 847, 848.

NURS 851. Clinical Management (3). Management of clinical data and analysis of professional issues including business skills necessary for advanced nursing practice. Students use existing data to determine health care outcomes and to evaluate delivery of care. Extensive computer use in laboratory setting with technical support. Computer literacy is expected. Prerequisites: all core courses, NURS 703. Pre- or corequisite: enrollment in a course within the student's clinical or administration specialization.
NURS 852. Adult Nursing Practicum II (3). An intensive clinical experience in which the student is expected to design, implement, and evaluate nursing care for adults. Specialized areas of study are selected and may involve health maintenance or illness care of acutely or chronically ill adults. Prerequisites: NURS 703, 834.

NURS 854. Diagnosis and Management of Mental Disorders (3). Explores current diagnostic and psychopharmacological strategies in advanced psychiatric nursing practice. Emphasis is on diagnostic reasoning and the management of mental health problems across the life span. Prerequisites: Admission to the graduate nursing program and departmental consent.

NURS 855. Management of the Acutely and Critically Ill Adult (3). Examines advanced nursing interventions focused on client stabilization and management of complications in the acutely/critically ill adult. Emphasizes the management of the adult with complex health problems. Interventions focus on application of advanced practice nursing care to the restoration of health/well being. Prerequisites: NURS 703, 805, 834, 839, 852; admission to the ACNP specialization and departmental consent.

NURS 856. Transition to PMHNP Advanced Practice Role I (1). Focuses on the application of theoretical models used in practice, the role of the psychiatric/mental health nurse practitioner, practice issues, and case scenario presentations with interactive discussions based on the use of established protocols and guidelines. Prerequisites: all core courses and NURS 854. Corequisites: NURS 819, 822.

NURS 857. Pediatric Primary Care II: Management of Common Health Issues (3). Focuses on health promotion, health maintenance, and risk reduction for children and adolescents with special health care needs. Emphasizes comprehensive assessment, diagnosis, and management of health, developmental, and chronic health problems within a family and developmental framework. Considers children with developmental and learning disabilities and children with select complex and chronic health problems. Emphasizes the collaborative and interdisciplinary nature of a child’s care in school and other settings. Addresses the unique needs of children in underserved communities. Sessuses applications of current research and theory-based interventions appropriate for management by advanced registered nurse practitioners. Emphasizes strategies and protocols to manage complex patient problems in urban and rural patients and interventions to restore children's and family levels of pre-illness health, including secondary and tertiary prevention. Prerequisites: NURS 703, 805, 834, 839, 852; admission to the ACNP specialization and departmental consent.

NURS 858. Pediatric Primary Care II Practicum: Clinical Management of Common Health Issues (3). A concentrated clinical practicum that emphasizes assessment and management of health promotion, health maintenance, and risk reduction for children and adolescents with special health care needs. Emphasizes comprehensive assessment, diagnosis, and management of health, developmental, and chronic health problems within a family and developmental framework. Includes children with developmental and learning disabilities and children with select complex and chronic health problems. Seminars focus on analysis and evaluation of clinical situations and cases. Prerequisite: NURS 703. Pre- or corequisite: NURS 857.

NURS 863. Nursing and Health Care Systems Administration: Capstone Seminar (3). Assists the student to integrate knowledge from nursing and administration courses to develop the individual's own management/administration practice. Uses a seminar approach with case studies, student presentations, and presentations by executives and other experts from the community. Prerequisites: NURS 703, 811, 812 (3 hrs), 827 and HMCID 642, 648. Pre- or corequisites: NURS 812 (additional 3 hrs), 851.

NURS 866. Transition to the CNS Advanced Practice Role I (1). Focuses on the application of theoretical models in practice; CNS role development, outcomes of care, practice issues, change process, and health system leadership. Corequisites: NURS 834 and 840.

NURS 868. Transition to Executive Nurse Leadership Role I (1). Focuses on the role of the executive nurse leader, role issues, and interactive discussions based on the use of established standards and guidelines. Organizational systems and leadership styles are examined. Prerequisite: NURS 811. Corequisite: NURS 812.

NURS 869. Analysis of e-Health (2). Analyzes e-health systems as one method to improve the overall health of populations. E-health initiatives developed from partnerships among health care providers, community and national organizations are evaluated. Examines barriers to e-health systems such as legal and regulatory issues, licensure and reimbursement policies, delivery of care within the limits of technology, and the relationship-based components of provider-patient interactions. Pre- or Corequisites: NURS 703, and 775 or departmental consent.

NURS 870. Global Awareness (2). Examines local and international cultural diversity and its impact on nursing and health care. Current tools to facilitate cultural communication exchanges are assessed. Pre- and corequisites: NURS 703, 715; admission to administration/leadership specialty, or instructor's consent.

NURS 874. Acute Care Nurse Practitioner Practicum I (4). A clinical experience that builds on pathophysiology and clinical management coursework, emphasizing evidence-based practice. Students participate in a medical rotation that is supervised by an ACNP or physician preceptor in the acute care setting. Emphasis is placed on physical assessment, interpretation of data, differential diagnosis, development and implementation of management plans, and performing relevant procedures. Patient and family education, health promotion, and prevention are emphasized. Corequisites: NURS 728, 840, and 842.

NURS 899. Special Topics (1–3). Provides a topic-specific update for those who hold a master's degree in nursing (MN or MSN) and who require additional knowledge prior to entering the Doctor of Nursing Practice (DNP) program. Repeatable for credit. Prerequisite: admission to the graduate nursing program and DNP program.

NURS 901. Organizational Systems & Leadership (3). Focuses on the application of theories of leadership and leadership development in changing and diverse health care organizations. Emphasis is on examining the impact of the art and science of leadership principles and practices on diverse health care organizations. Prerequisite: completion of one specialty practicum course or departmental consent.

NURS 902. Population and Social Determinants of Health (3). Provides an analysis of major social variables that affect population health. Students examine health consequences of various social and economic factors. Emphasizes evidence-based practice strategies for populations. Prerequisite: completion of one specialty practice course or departmental consent.

NURS 903. FNP Primary Care II (3). Focuses on complex problems seen in individuals and families throughout the life span. Stresses applications of current research and theory-based interventions appropriate for management by advanced registered nurse practitioners. Emphasizes strategies and protocols to manage complex patient problems in urban and rural patients, interventions to restore individual and family levels of pre-illness health, including secondary and tertiary prevention. Prerequisites: NURS 803, 804, 830, 838. Corequisites: NURS 904, 905, 906.

NURS 904. FNP Primary Care Practicum II (4). Emphasizes assessment and management of common health problems across the life span, based on knowledge of theory and research. Primary care clients with common medical conditions among major body systems assessed and managed. Weekly seminars focus on analysis and evaluation of clinical situations and cases. Prerequisites: NURS 803, 804, 830, 838. Corequisites: NURS 903, 905, 906.

NURS 905. FNP Management and Clinical Application II (2). Students engage in extensive discussion and application of the pathophysiology and management of acute and chronic health problems in individuals across the life span. Emphasis is on the use of theory and evidence-based practice for clinical decision making and problem solving while providing for cost effective care. Prerequisites: NURS 803, 804, 830, 838. Corequisites: NURS 903, 904, 906.

NURS 906. Transition to FNP Advanced Practice Role II (1). Focuses on the application of theoretical models used in practice, primary care office practice issues, case presentation, and case presentations work-up and outcome of care, with interactive discussions based on established protocols and guidelines. Topics of presentations are guided by current lecture material in Primary Care II. Prerequisites: NURS 803, 804, 830, 838. Corequisites: NURS 903, 904, 905.

NURS 909. Pathophysiology and Management of Acute Care Problems II (3). The second of two courses that examine pathophysiology and management of acute, chronic, and multisystem health problems in adults. Emphasis is placed on the scientific underpinnings for clinical decision making and practice issues. Major themes address normal physiology, pathophysiology, assessment, diagnosis, and management of acute, critical, and exacerbation of chronic disease states. Health promotion and disease prevention are emphasized. Prerequisites: NURSE 793, and 840.

NURS 910. ACNP Practicum II (4). Advanced clinical experience that is a continuation of NURS 874. Students participate in surgical and/or emergency department rotations supervised by an ACNP or physician preceptor in the acute care setting. Emphasis is placed on physical assessment, interpretation of data, differential diagnosis,
NURS 911. Transition to the ACNP Advanced Practice Role II (1). Focuses on collaborative practice, outcomes of care, practice issues, and care discussion. Emphasis is placed on developing collaborative relationships with other health professionals. Case discussions emphasize the application of physiologic principles and clinical management of acute health problems. Corequisites: NURS 909, and 910.

NURS 912. Management of the Acutely and Critically Ill Adult (3). Examines advanced nursing interventions focused on client stabilization and management of complications in the acutely and critically ill adult. Emphasis is placed on diagnostic reasoning and the management of the adult with complex health problems. Interventions focus on application of advanced practice nursing care to the restoration of health/well-being. Prerequisite: NURS 909, and 911.

NURS 915. PNP Primary Care II (3). Focuses on complex problems seen in pediatric patients and families. Stresses applications of current research and theory-based interventions appropriate for management by advanced registered nurse practitioners. Emphasizes strategies and protocols to manage complex pediatric health problems, and interventions to restore individual and family levels of pre-illness health, including prevention. Prerequisites: NURS 846, 847, 848, 850. Corequisites: NURS 916, 917, 918.

NURS 916. PNP Primary Care Practicum II (4). Emphasizes assessment and management of complex pediatric health problems, based on knowledge of theory and research. Primary care pediatric clients with complex conditions affecting major body systems are assessed and managed. Prerequisites: NURS 846, 847, 848, 850. Corequisites: NURS 915, 917, 918.

NURS 917. PNP Management and Clinical Application II (2). Students engage in extensive discussion and application of the pathophysiology and management of acute and chronic health problems in pediatric patients. Emphasis on the use of theory and evidence-based practice for clinical decision making and problem solving while providing for cost effective care. Prerequisites: NURS 846, 847, 848, 850. Corequisites: NURS 915, 916, 918.

NURS 918. Transition to PNP Advanced Practice Role II (1). Focuses on the role of the Pediatric Nurse Practitioner in the application of theoretical models used in pediatric primary care practice. Topics of presentations are guided by current lecture material in Primary Care II. Prerequisites: NURS 846, 847, 848, 850. Corequisites: NURS 915, 916, 917.


NURS 922. Psychiatric/Mental Health Nursing Practicum II (4). Practicum is an intensive clinical experience in which students analyze group processes and initiate and evaluate therapeutic strategies with groups. Emphasis on the performance of group therapy as well as psychiatric assessment which includes interpretation of relevant data, differential diagnosis, and development and implementation of management plans. Appropriate interventions to promote the group process are emphasized. Prerequisites: NURS 819, 822, 856. Corequisites: NURS 921, 923.

NURS 923. Transition to PMHNP Advanced Practice Role II (1). Focuses on the application of theoretical models used in practice, the role of the psychiatric/mental health nurse practitioner, practice issues, and case scenario presentations with interactive discussions based on the use of established protocols and guidelines. Prerequisites: NURS 819, 822, 856. Corequisites: NURS 921, 922.

NURS 927. Transition to the CNS Advanced Practice Role II (1). Focuses on continued CNS role development, case management, outcomes of care, evidence-based practice, and practice issues. Corequisites: NURS 909, 928.

NURS 928. Adult CNS Practicum II (4). An intensive clinical experience in which the student is expected to design, implement, and evaluate nursing care for adults. Emphasizes application of case management principles and health promotion strategies for a selected population. Corequisites: NURS 909, 927.

NURS 940. Theoretical Aspects of Consultation and Coaching (3). Analyzes and practices consultation, coaching, and practice as key factors in improving work environments, staff retention, and work satisfaction. Examines the theory of coaching consultation skills as frameworks for developing and enhancing knowledge and skills in a rapidly changing health care environment. Prerequisites: NURS 703, 715, 811, 827, or instructor's consent.

NURS 941. Advanced Leadership Theory Analysis and Assessment (3). Examines the theoretical frameworks for leadership styles and assessments. Explores the individual's approach to leadership. Health care situations and the impact of specific leadership styles are explored. Includes a self-assessment and analyses of individual student leadership strengths and styles. Prerequisites: NURS 811, 812, 826, 827, 901.

NURS 943. Transition to Executive Nurse Leadership Role II (1). Assists students to integrate knowledge from nursing and administration courses to develop individual management/administration competencies. Uses a seminar approach with case studies, student presentations, and presentations by executives and other experts from the community. Prerequisite: NURS 868. Corequisite: NURS 812 or instructor's consent.

NURS 950. Practice Management (2). Management and analysis of professional issues including business skills necessary for advanced nursing practice. Emphasizes business practices needed for advanced nursing practice including contract negotiation, and strategies for outcomes evaluation. Prerequisite: completion of two specialty practica or departmental consent.

NURS 952. Advanced Nursing Practice Preceptorship (3). Concentrated clinical practicum in the student's specialization health care setting that emphasizes the management of care for individuals. Students synthesize concepts and principles from previous classes and clinical experiences, applying theoretical and research content to acute, chronic, urgent and/or common health problems. Preceptorship is in a clinical agency appropriate to the student's clinical interests. Prerequisites: completion of all core and specialization courses in NP/CNS option; departmental consent.

NURS 956. Practice Management (2). Management and analysis of professional issues including business skills necessary for advanced nursing practice. Emphasizes business practices needed for advanced nursing practice including contract negotiation, and strategies for outcomes evaluation. Prerequisite: completion of two specialty practica or departmental consent.

NURS 959. Evidence-Based Nursing Project III (3). Evidence-based project includes needs assessment, problem identification, and the development of a project proposal. The student works collaboratively with a graduate nursing faculty member to develop the project for a practice setting. Prerequisite: NURS 828 or departmental consent.

NURS 960. Residency (2, 4, or 6). An extensive, advanced-level learning experience tailored for the student and mentored by at least one graduate nursing faculty member and one other graduate faculty member. The residency allows the student to complete and disseminate the results of the project developed in NURS 959. At the end of the residency, the student submits a DNP portfolio including the evidenced-based project manuscript or abstract and other student-authored manuscripts, clinical innovations, critically analyzed case studies, documented advanced nursing practice, evidence of practice management and quality assurance principles, and other scholarly work. Repeatable for a minimum of 6 credit hours, until requirements are met. Graded S/U only. Prerequisite: NURS 828, 959 or departmental consent. All other required courses must be taken prior to this course. Post-master's DNP students in the individual/family focus must be nationally certified in their specialization. Post-master's DNP students in the aggregate/systems organizational focus must be nationally certified in their specialization when available.
Fairmount College of Liberal Arts and Sciences

Offices: 200 LAS
William Bischoff, dean
Charles Koeber, associate dean
Eunice Myers, associate dean

Department and Program Contacts:
Anthropology, (316) 978-3195—Peer Moore-Jansen, chairperson; David Hughes, graduate coordinator
Biological Sciences, (316) 978-3111—William Hendry III, chairperson; Karen Brown, graduate coordinator
Chemistry, (316) 978-3120—David Eichhorn, chairperson; William C. Groutas, graduate coordinator
Communication, Elliott School of, (316) 978-7200—Michael Birzer, director
Criminal Justice, (316) 978-7200—Michael Birzer, graduate coordinator
Ethnic Studies, (316) 978-7200—Michael Birzer, program director
Gerontology, (316) 978-6684—TBA, graduate coordinator
Earth, Environmental and Physical Sciences, (316) 978-3140—William Parcell, graduate coordinator
English, (316) 978-3130—Don Wineke, chairperson; Mary Waters, graduate coordinator; Margaret Dawe, creative writing program director
Geology, (316) 978-3140—Wan Yang, chairperson
History, (316) 978-3150—Robert Owens, chairperson; John Dreifort, graduate coordinator
Liberal Studies, (316) 978-3125—David Soles, graduate coordinator
Mathematics, (316) 978-3160—Buma L. Fridman, chairperson; Kenneth Millet, graduate coordinator
Modern and Classical Languages and Literatures, (316) 978-3180—Wilson Baldridge, chairperson; Maria Akrabova, graduate coordinator
Philosophy, (316) 978-3125—David Soles, chairperson
Physics, (316) 978-3190—Nicholas Solomay, chairperson
Political Science, (316) 978-3165—Carolyn Shaw, chairperson
Psychology, (316) 978-3170—Charles Burdsal, chairperson; Robert Zettle, graduate coordinator
Religion, (316) 978-3108—Stuart Lasine, director
Social Work, School of, (316) 978-7250—Linnea GlenMaye, director; Brien Bolin, graduate coordinator
Sociology, (316) 978-3280—Ron Matson, chairperson; Twyla Hill, graduate coordinator
Urban and Public Affairs, Hugo Wall School of, (316) 978-7240—John Wong, interim director
Kansas Public Finance Center, (316) 978-7240—John Wong, interim director
Public Administration, (316) 978-6693—Sam Yeager, graduate coordinator
Women's Studies, (316) 978-3358—Deborah Gordon, chairperson

Anthropology (ANTH)
Graduate Faculty
Professors: Dorothy Billings, Donald Blakeslee, Robert Lawless, Peer Moore-Jansen (chairperson),
Associate Professor: David Hughes (graduate coordinator)
Assistant Professor: Jens Kreinath

The anthropology department offers a course of study leading to the Master of Arts (MA) degree.

Admission Requirements
Admission to the MA program in anthropology requires the completion of a minimum of 15 credit hours in anthropology to include courses in history and theory of anthropology and in the three main subdivisions of the discipline, and a grade point average in the last 60 hours of credit of 3.250 (on a 4.000 scale).

The deadline for application is February 1 for fall and Oct. 1 for spring. Prospective students are required to submit a written statement of purpose that addresses their intended area(s) of specialization. Applications will be reviewed by the entire faculty and accepted if there is a faculty member specializing in the applicant’s area of interest and available to serve as graduate adviser.

Applicants will be notified of the faculty’s decision by March 15 for fall admission or November 15 for spring admission.

Graduate Certificate Contacts
Applied Communication, (316) 978-6059—Patricia Dooley, graduate coordinator
City/County Management, (316) 978-6693—Sam Yeager, graduate coordinator
Economic Development, (316) 978-6693—Sam Yeager, graduate coordinator
Nonprofit Management, (316) 978-6693—Sam Yeager, graduate coordinator
Public Finance, (316) 978-6693—Sam Yeager, graduate coordinator
Students deficient in any of the course prerequisites may be admitted conditionally pending removal of the deficiencies.

**Degree Requirements**

Only graduate students may enroll in 700- and 800-level courses for graduate credit. All graduate students who have been required to take ANTH 647 "Theories of Culture" must successfully complete this requirement prior to enrolling in ANTH 746, Advanced Cultural Anthropology. Graduate enrollment in ANTH 770, Advanced Readings, requires successful completion of the corresponding core course of the particular area of focus, that is, ANTH 736 or 746 or 756. To enroll in a graduate seminar (ANTH 801, 802, 820, 837, or 848) a student must have full graduate standing and 6 hours of graduate coursework in anthropology, including the core course (ANTH 736, 746, or 756) in the same subfield as the seminar. To enroll in ANTH 871–2, ANTH 873–4, or ANTH 875–6, graduate students must have successfully completed ANTH 736, 746, and 756 and have their final project (thesis, project, or internship) approved by their committee.

A master's degree in anthropology requires 36 hours of graduate study, of which 60 percent (22 hours) must be numbered 700 or above. All students are required to take core courses in archaeological anthropology (ANTH 736), socio-cultural anthropology (ANTH 746) and biological anthropology (ANTH 756), two seminars (ANTH 801, 802, 820, 837, or 848), and two semesters of Colloquium in Anthropology (ANTH 847). Students in all tracks are required to complete the core course in a particular subfield (cultural, biological, or archaeological anthropology) prior to registering for any seminar in the same subfield, and students must complete seminars in two subfields. Students interested in multidisciplinary topics may, with the consent of their committee, count up to 12 hours of graduate-level credit from other disciplines toward their degree.

**Track 1** requires satisfying all the general requirements listed above and the completion of written comprehensive exams, 4 hours of thesis including 2 hours each of ANTH 875 and 876, and the presentation of a thesis. Students must also satisfy a statistics requirement.

Comprehensive exams are graded by all full-time teaching faculty in the department.

**Track 2** requires satisfying all the general requirements listed above, the completion of a project approved by the student's project committee, and the presentation of a project report. Track 2 students must take 2 hours each of ANTH 873 and 874.

**Track 3** requires satisfying all the general requirements listed above, the completion of an internship approved by the student's internship committee, and the presentation of an internship report. Track 3 students must take 2 hours each of ANTH 871 and 872.

Students in all tracks are required to form a thesis/project/internship committee of at least two full-time graduate teaching faculty from within the anthropology department and at least one graduate faculty from another department. This committee must be formed prior to or upon the completion of 18 hours of graduate study. Students must present to their committee a proposal for their thesis, project, or internship. The committee approves these proposals and also the oral defense of all theses, project reports, and internship reports. Theses, project reports and internship reports must be submitted to the committee at least 10 working days prior to the date of the actual defense.

All students who present a thesis, project, or internship must pass an oral defense of their effort. A foreign language examination is contingent upon the nature of the thesis topic.

**Examinations**

Students in Track 1 are required to take the written comprehensive examination. Students must have completed a minimum of 15 credit hours of graduate work in anthropology, including ANTH 736, 746, and 756, before taking the examination which is usually given during the fourth week of each semester. All graduate students taking the comprehensive examination must obtain the Packet for the Comprehensive Examination (PACE) from the department office for detailed information on this requirement. Students are required to sign up for the comprehensive exam during the semester prior to taking it. Also, students must attend a comprehensive exam workshop during the semester prior to taking the exam.

**Courses for Graduate/Undergraduate Credit**

**ANTH 508. Introduction to Archaeological Laboratory Techniques (1–3).** Maximum of 3 hours. An introduction to the laboratory processing of archaeological materials. Direct experience in all phases of preparing excavated materials for analysis, including cleaning, restoring, preserving, numbering, and cataloging ceramic and lithic artifacts and other remains. Prerequisite: ANTH 305.

**ANTH 506. Peoples of the Pacific (3).** A survey of the races, languages, and cultures of non-literate peoples of Polynesia, Micronesia, and Indonesia.

**ANTH 509. Cultures of Ancient Mexico (3).** Archaeological and ethno-historic survey of the numerous civilizations of ancient Mexico from earliest inhabitants to the period of the Spanish invasion. The cultures covered include Olmec, Teotihuacan, Zapotec, and Aztec. Explores the environmental, social, and political conditions that led to the rise and fall of societies across Mexico. Prerequisite: ANTH 103.

**ANTH 510. Archaeology of the Ancient Maya (3).** Development of the tropical Lowland Maya civilization in Mesoamerica from the origins of agriculture through the Spanish Conquest. Topics include the rise of divine kingship, the Maya calendar and hieroglyphic writing, inter-state conflict and warfare, and Maya religion. Explores archaeological, ethno-historical, and linguistic data and accounts. Prerequisite: ANTH 103.

**ANTH 511. The Indians of North America (3).** A survey of tribal societies and native confederations north of Mexico from the prehistoric through the historic period. Prerequisite: ANTH 102.

**ANTH 515. China (3).** An introduction to the people of China and aspects of their culture: economy, government, society, religion, and the arts. Historical attention on the many adjustments the Chinese made during the 20th century following political revolutions, industrialization, and expanding trade relations.

**ANTH 516. Japan: People and Culture (3).** An introduction to the culture of Japan including its history and prehistory, aspects of traditional culture and 20th century Japan, its economy, politics and social organization.

**ANTH 519. Applying Anthropology (3).** The application of anthropological knowledge in the solution of social problems in industry, public health, and public administration. Prerequisite: ANTH 102.

**ANTH 522. Art and Culture (3).** A survey of the visual and performing arts of non-Western peoples with special attention to their relationships in the cultural setting. Prerequisite: ANTH 102.

**ANTH 536. Social Organization (3).** A survey of the varieties of social organization among peoples throughout the world. Deals with family systems; kinship, residence patterns; and lineage, clan, and tribal organizations. Prerequisite: 6 hours of anthropology.

**ANTH 528. Medical Anthropology (3).** Studies the health and behaviors of various human societies, especially in, but not limited to, those outside the Western, scientific tradition. Covers attitudes toward the etiology of disease, the techniques of healing, the use of curative drugs and other agents, the roles of healers and therapists, and the attitudes of the community toward the ill. A library or field research project is required. Prerequisite: 3 hours of nursing or 3 hours of anthropology or instructor's consent.

**ANTH 538. Early Man in the New World (3).** A critical examination of facts and theories concerning early man in the New World from the peopling of the continent to the beginning of the Archaic Tradition, and of the role of cultural contacts between Eastern Asia and North America. Prerequisite: ANTH 305.
ANTH 542. Women in Other Cultures (3). Cross-listed as WOMS 542. Deals with the place of women in primitive and other non-Western societies, in various aspects of culture: political, economic, social, religious, domestic, intellectual, psychological, and aesthetic. Compares and contrasts societies in order to see how different kinds of roles for women are related to different kinds of societies.

ANTH 555. Paleoanthropology and Human Palaeontology (3). A detailed examination of human evolutionary history as evidenced by fossil remains and a survey of various interpretive explanations of the fossil record. Prerequisite: ANTH 101 or BIOL 210 or equivalent.

ANTH 557. Human Osteology (3). Deals with human skeletal and dental materials with applications to both physical anthropology and archaeology. Lecture and extensive laboratory sessions; includes bone and tooth identifications, measurement and analysis, and skeletal preservation and reconstruction. Individual projects are undertaken. Prerequisite: ANTH 101 or equivalent.

ANTH 597. Topics in Anthropology (3). Detailed study of topics in anthropology. Content varies with interest of instructor. Consult Schedule of Courses for current topic.

ANTH 600. Forensic Anthropology (3). Cross-listed as CJ 600. Encompasses the area of criminal investigation involving biological evidence: blood, hair, fingerprint, dentition, and skeletal system. Covers procedures of collection, preservation, marking, transportation, referral, laboratory analysis, classification, and identification emphasizing anthropological interpretation. Prerequisite: ANTH 101 or equivalent.

ANTH 602. Archaeological Laboratory Analysis (1–3). Students analyze archaeological materials, including ceramic, lithic, faunal, and vegetal remains according to accepted methods. Students learn to apply standard methods of identification and modes of interpretation to the materials to produce an acceptable archaeological report. Prerequisites: ANTH 502 and instructor's consent.

ANTH 606. Museum Methods (3). An introduction to museum techniques relating to the acquisition of collections and related procedures, such as accessioning, cataloging, documentation, presentation, and storage. Emphasizes current trends in museological philosophy concerning purpose, function, and relevance of museums, as well as career opportunities. Prerequisite: instructor's consent.

ANTH 607. Museum Exhibition (3). Contemporary philosophy of exhibition design and the application of recent concepts to the planning and installation of an exhibit. Prerequisite: ANTH 606 or instructor's consent.

ANTH 609. Biological Anthropology Laboratory Analysis (1–3). Analyzes biological anthropology materials including human and non-human skeletal material of both forensic contemporary or prehistoric origin according to standardized methods for recording and collecting data in biological anthropology. Learn methods of identification, analysis, and interpretation and prepare a standard technical report. Repeatable up to 6 credit hours. Prerequisites: Anthropology 101, 106, 356, or 557.

ANTH 611. Southwestern Archaeology (3). A comprehensive survey of the prehistoric, historic, and living cultures of the American Southwest particularly emphasizing the cultural continuities and changes covering 11,000 years. Prerequisite: one introductory course in anthropology or departmental consent.

ANTH 612. Indians of the Great Plains (3). An investigation of the cultural dynamics of the Great Plains area from the protohistoric period to the present. Prerequisites: 6 hours of anthropology and departmental consent.

ANTH 613. Archaeology of the Great Plains (3). The archaeology of the Great Plains area from earliest evidence to the historic period. Prerequisite: one introductory course in anthropology or departmental consent.

ANTH 647. Theories of Culture (3). A survey of the main theoretical movements in cultural anthropology, including both historical and contemporary schools of thought. Prerequisite: 6 hours of anthropology.

ANTH 651. Language and Culture (3). Cross-listed as LING 651 and MCLL 651. An introduction to the major themes in the interactions of language and society, and language and culture, including ethnography of communication, linguistic relativity, and determinism; types of language contact, the linguistic repertoire, and cross-cultural discourse analysis. Content may vary with instructor. Prerequisite: 3 hours of linguistics or MCLL 351 or 6 hours of anthropology.

ANTH 690. Field Methods in Anthropology (3–6). A maximum of 6 hours can be counted as anthropology hours toward either degree. Instructs the student in archaeological and ethnological field methods through actual participation in a field research program. The project depends upon the specific summer session and varies from year to year. Prerequisite: instructor's consent.

ANTH 736. Advanced Studies in Archaeology and Ethnohistory (3). Special area and theory problems in a historical approach to culture. Prerequisites: graduate standing and 6 hours of anthropology.

ANTH 746. Advanced Studies in Cultural Anthropology (3). Entails an in-depth coverage of selected topics in cultural anthropology, including social structure, economic and political organization, religion, personality, arts and knowledge systems, and current research methods. Prerequisites: graduate standing and 6 hours of anthropology, including ANTH 647 or equivalent as determined by the graduate coordinator.

ANTH 750. Workshop (1–4). Short-term courses focusing on anthropological problems. Prerequisite: instructor's consent.

ANTH 756. Advanced Studies in Biological Anthropology (3). In-depth coverage of selected topics in biological anthropology, including the history of evolutionary thought, human variation, growth and development, population dynamics, paleoanthropology, and primatology. Focuses on current issues, method, and theory in biological anthropology. Prerequisites: graduate standing and 6 hours of anthropology (must include ANTH 101 or instructor's consent).

ANTH 770. Advanced Readings (2–3). Provides opportunities for additional student research and reading on concepts and topics covered in the core graduate courses, ANTH 736, Advanced Studies in Archaeology and Ethnohistory; ANTH 746, Advanced Studies in Cultural Anthropology; and ANTH 756, Advanced Studies in Biological Anthropology. Repeatable up to 6 hours. Prerequisite: full graduate standing, completion of one core course (ANTH 736, 746, or 756), and departmental consent.

ANTH 781. Cooperative Education (1–4). Provides practical experience that complements the student's academic program. Requires consultation with, and approval by, an appropriate faculty sponsor. Offered Credit/No Credit only. Repeatable for credit. May not be used to satisfy degree requirements. Prerequisite: graduate status.

ANTH 798. Introduction to Research (3). Research methodology in anthropology, including bibliography, research design, and the philosophy of research. Prerequisites: full graduate standing and completion of at least one of the following core courses: ANTH 736, 746, or 756.

Courses for Graduate Students Only

ANTH 801. Seminar in Archaeology (3). Comprehensive analysis of archaeological data emphasizing theoretical problems of interpretation and reconstruction. Repeatable up to 6 hours.

ANTH 802. Methods in Anthropology (2–3). Develops abilities in the conception and investigation of anthropological problems and problem solving and observation techniques, as well as more specialized methods such as photography, mapping, and tape recording. Repeatable up to 6 hours. Prerequisite: departmental consent.

ANTH 820. Seminar in Biological Anthropology (3). Analysis and discussion of ancient fossil, prehistoric, historic, and recent/modern biological variation in an anthropological perspective. Can include advanced studies of human variation and skeletal biology, demography and population genetics in anthropology, advanced studies in paleoanthropology and issues in the debate over micro and macro levels of evolution, and quantitative applications to the study of human variation in anthropological contexts. Repeatable up to 6 hours. Prerequisite: departmental consent.

ANTH 837. Seminar in Cultural Anthropology (3). Intensive study of advanced theoretical questions in cultural anthropology. Repeatable up to 6 hours. Prerequisites: graduate standing and 5 hours of completed graduate coursework in anthropology including ANTH 746.

ANTH 847. Colloquium in Anthropology (1). Seminar-style experience in recent research in all of the subfields of anthropology. Allows those students preparing their first papers for presentation at professional conferences to present them before a critical but friendly audience. May be repeated once for additional credit. S/U grade only. Prerequisite: graduate standing in anthropology.

ANTH 848. Recent Developments in Anthropology (3). A review of the latest discoveries and interpretations in the science of human beings. Repeatable up to 6 hours. Prerequisite: 5 hours of anthropology.

ANTH 870. Independent Reading (2–3). Repeatable up to 6 hours. Prerequisite: departmental consent.

ANTH 871–872. Internship in Anthropology (2–3). Students following applied or multidisciplinary tracks, such as museology or international business education, or health professions receive professional work experience in
their field through an internship at a designated workplace approved by departmental committee. Course requires a written report. Prerequisite: full graduate standing, completion of ANTH 736, 746, 756, and committee consent.

ANTH 873–874. Advanced Project in Anthropology (2–2). In consultation with their major adviser and committee, students design a project (e.g., a museum exhibit, a written plan for an international business venture, a lesson plan for an anthropology unit in schools) that applies anthropological method and theory to the specific needs of an institution, group, or population. Requires a tangible end product (e.g., paper, thesis, or visual production or exhibit). Prerequisite: full graduate standing, completion of ANTH 736, 746, 756, and committee consent.

ANTH 875–876. Thesis (2–2). Prerequisite: full graduate standing, completion of ANTH 736, 746, 756, and committee consent.

Biological Sciences (BIOL) Graduate Faculty
Professor: William J. Hendry III (chairperson),
George R. Bousfield, Paul Wooley
Associate Professors: Christopher M. Rogers, Mark A. Schneegurt, J. Karen L. Brown Sullivan (graduate coordinator), Shang-You Yang
Assistant Professors: Gregory Houseman, Leland Russell, Bin Shuai

Master of Science and Areas of Specialization
The Master of Science (MS) program offered by the department of biological sciences provides an advanced education with the research thesis. A variety of specializations in the broad areas of cell, molecular, endocrine, reproductive, and environmental biology are available. All incoming students are assigned to a temporary graduate adviser after which they choose a permanent graduate adviser and committee. The advisers work with the students to develop a program of studies that meets the students’ educational goals.

Admission Requirements
Completed application forms and two official transcripts of all previous academic work must be submitted to the Graduate School according to published deadlines. Admission as a full-standing student requires: (1) the completion of 24 credit hours in biological sciences and 15 credit hours in chemistry; (2) an overall grade point average of at least 2.750 (4.000 scale) for the most recent 60 credit hours completed; (3) a grade point average of at least 3.000 (4.000 scale) for all undergraduate biological sciences courses; (4) three letters of reference from science faculty; (5) receipt of GRE general aptitude and advanced test in biology scores; and (6) acceptable TOEFL or IELTS scores if English is not the student’s first language. Students who do not meet these requirements but who wish to begin graduate coursework may qualify for conditional acceptance into a non-degree category.

Degree Requirements
All students are required to attend the departmental seminar course (BIOL 797) each semester and must give at least two oral presentations.

Candidates will conduct a research thesis and complete 30 credit hours of graduate work, including the presentation and oral defense of a thesis based on original research.

Courses for Graduate/Undergraduate Credit
BIOL 502. Vascular Plants (4). 2R; 4L. An introduction to the structure, reproduction, and evolution of the major groups of living and extinct vascular plants. Includes an introduction to flowering plant systematics. Students earning graduate credit perform a primary literature survey on a topic selected in consultation with the instructor and deliver a 30-minute oral presentation to the class. Prerequisites: BIOL 204 or 211 and CHEM 212.

BIOL 503. Taxonomy and Geography of Flowering Plants (4). An introduction to the principles and methods of plant taxonomy and to the study of the patterns of plant distribution and the origin of these patterns. Class time is divided among lectures, laboratories, and field work. Field trips throughout Sedgwick County and to the Flint Hills and Chautauqua Hills provide an opportunity to collect specimens and to observe ecology and distribution of native species of flowering plants. Prerequisites: BIOL 204 or 211 and CHEM 212.

BIOL 518. Biology of Aging (3). Cross-listed as GERO 518. An introduction to the phenomenon of aging, including a survey of age-related processes and mechanisms of senescence. Emphasizes changes occurring in organisms. Students earning graduate credit produce a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisite: a basic course in biological sciences that satisfies general education requirements.

BIOL 523. Freshwater Invertebrates (4). 2R; 4L. Emphasizes the ecology, taxonomy, form and function of free-living freshwater invertebrates. Half of the course deals with invertebrates. Includes methods of collecting, culturing, and preserving specimens. Part of the course grade is based on a collection of invertebrates correctly prepared and identified. For graduate credit, students submit a term paper or an extensive collection within a given taxon. Prerequisites: BIOL 211 and CHEM 212.

BIOL 524. Vertebrate Zoology (3). Evolution, distribution, natural history, and special characters of vertebrate animals. Students earning graduate credit produce a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisites: BIOL 204 or 211, and CHEM 212. BIOL 527 is also recommended.

BIOL 525. Endocrinology (4). 3R; 3L. The hormonal regulation of bodily functions is considered in representative vertebrate systems, including humans. Students enroll in both lecture and laboratory portions of class. Students earning graduate credit submit a term paper on a topic chosen in consultation with the instructor. Prerequisites: BIOL 204 or 211 and CHEM 212.

BIOL 527. Comparative Anatomy (5). 3R; 4L. An intensive study of representative chordates emphasizing vertebrate anatomy. Students earning graduate credit complete additional assignments chosen in consultation with the instructor, such as a term paper based on technical literature, dissection of additional animals, etc. Prerequisites: BIOL 204 or 211 and CHEM 212.

BIOL 528. Parasitology (4). 2R; 4L. Studies the parasites of man and other vertebrate hosts. Students earning graduate credit produce a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisites: BIOL 204 or 211 and CHEM 212.

BIOL 529. Vertebrate Zoology Lab (2). Dissection of vertebrates with an emphasis on learning the taxonomy of Kansas families of fishes, Kansas species of amphibians and reptiles, North American orders of birds, and world orders, suborders, and families of mammals. Form and function are included. Prerequisites: BIOL 211, CHEM 212. Corequisite: BIOL 524, or instructor’s consent.

BIOL 530. Applied and Environmental Microbiobiology (3). A characterization of the roles of microbes in natural and man-made environments. Discussions of microbial ecology and communities, interrelationships with higher organisms, biogeochemical cycling, biotechnology, and bioremediation. Students earning graduate credit produce a research paper based on primary literature on a topic chosen in consultation with the instructor. Prerequisites: BIOL 204 or 211 and CHEM 212.

BIOL 532. Entomology (4). 2R; 4L. An introduction to the morphology, physiology, life cycles, behavior, ecology, and economic significance of insects. Students earning graduate credit produce a term paper based on the technical literature on a topic chosen in consultation with the instructor or develop proficiency in a specific taxonomy by performing an individual systems project. Prerequisites: BIOL 204 or 211 and CHEM 212.

BIOL 534. Human Physiology (3). An organ systems approach to human physiology. Emphasizes nervous and endocrine control systems and the coordination of body functions. Students earning graduate credit submit a term paper based upon library research on a topic in human physiology chosen in consultation with the instructor. Prerequisites: BIOL 204 or 211 and CHEM 531, or instructor’s consent.

BIOL 535. Human Physiology Laboratory (2). 4L. An empirical approach to human physiology. Students seeking graduate credit submit an additional laboratory report relating the results of a laboratory experiment to those found in the current technical literature. Prerequisite: BIOL 534.

BIOL 540. Developmental Biology (4). 2R; 4L. Developmental processes in animals emphasizing vertebrates. Centered on the cell interactions controlling differentiation and morphogenesis. Students earning graduate credit complete additional assignments chosen in consultation with the instructor. Prerequisites: BIOL 204 or 211 and CHEM 212. BIOL 420 recommended.

BIOL 560. Plant Ecology (2). 2R. An examination of the relationship of plants to their environment at the organismal, population, community, and ecosystem levels. For graduate credit, a student must prepare and present a 30-minute lecture over one of the topics covered in this
course. Prerequisites: BIOL 418 and CHEM 212 or instructor's consent.

BIOL 561. Plant Ecology Laboratory (2). Laboratory component of BIOL 560. Field trips are an integral part of the course. Emphasizes an experimental approach to plant ecology. For graduate credit, a student must present the results of the library/laboratory project orally, as well as in writing. Prerequisite: prior or current enrollment in BIOL 560.

BIOL 570. Conservation Biology (3). Examines the application of fundamental concepts in ecology, evolutionary biology and genetics to the preservation of biological diversity at the levels of genotypes, species and ecosystems. Topics covered include 1) how biologists quantify biological diversity, 2) threats to biological diversity, 3) tools used to evaluate the level of threat to individual species and to design species management plans, and 4) concepts and considerations for preserve design. Decisions related to biodiversity conservation often have social and economic consequences, students explore these complexities through case studies. Skills developed in this course include critical reading of primary scientific literature, scientific writing and oral presentation. Prerequisite: BIOL 418.

BIOL 572. Computer Methods in Biology (3). Includes mathematical modeling of biological systems, tools for recording and retrieving experimental results, computer-aided instruction, Internet and online science resources, software for scientific publication including digital photo-documentation and reference managers for bibliographies. Students select a biology topic of interest, study non-statistical and computer approaches previously used, and develop their own approach. Half the course is lectures and demonstrations and half is individual student projects. Graduate students are expected to have had prior experience with the primary literature and be prepared to execute a more sophisticated library research project. Prerequisite: one of the following: BIOL 418, 419, 420, or instructor's consent.

BIOL 573. Statistical Applications in Biology (3). Supplements STAT 370 by providing experience with practical applications of statistical theory to biological data. Includes computations on data derived from both the primary literature and independently designed research projects. Emphasizes the design of experiments to answer specific hypotheses, the treatment of non-normally distributed data sets and nonhomogeneous experimental test units, and the use of packaged computer programs for certain statistical tests. Access to calculators with at least two memory banks is strongly encouraged. Students earning graduate credit complete an additional statistical analysis assignment involving the use of the computing facilities. Prerequisite: STAT 370.

BIOL 575. Field Ecology (3). 9L. Techniques for analysis of systems consisting of living organisms and their environments. Field trips are required. Students earning graduate credit perform an individual project on comparative community structure and report the results as a technical paper. Prerequisite: BIOL 418 or instructor's consent.

BIOL 578. Aquatic Ecology (4). 2R; 4L. Introduction to the biological and physical processes that operate in lakes, streams, and estuaries. Requires assigned readings, individual projects, and field trips. Students earning graduate credit investigate and compare the characteristics and properties of two freshwater ecosystems or investigate a specific taxon or trophic level in a freshwater ecosystem. The results of this investigation are reported as a technical paper. Prerequisite: BIOL 418 or instructor's consent.

BIOL 590. Immunobiology (3). The nature of antigens and antibodies and their interactions. Includes cellular and humoral aspects of immunologic phenomena. Students earning graduate credit prepare a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisites: BIOL 204 or 211 and CHEM 531.

BIOL 595. Avian Biology (3). Presents birds (class Aves) as models in contemporary animal behavior, physiological ecology, evolutionary biology, population ecology, and conservation. The laboratory portion of the course teaches field identification of resident and migratory species by sight, song, and call note on frequent field trips to a diversity of habitats, and culminates in a field survey of avian species diversity and abundance conducted by each student. Additional laboratory topics are bird banding, determination of age, sex, body lipid reserves, morphological measurement, and population census. Student-led discussions of current papers in avian biology are required, as is an all-day Saturday field trip during spring migration through the Central Flyway, which includes south central Kansas. Graduate students must write a term paper on an approved topic in avian biology. Prerequisites: BIOL 204 or 211 and CHEM 212, or instructor's consent.

BIOL 610. Topics in Botany (3–4). Selected offerings in botany. Consult the Schedule of Courses for current offerings. Students wishing to enroll in courses not listed in the current schedule must complete a Directed Independent Study Abstract form and obtain approval prior to enrollment. Students earning graduate credit produce a term paper based on the technical literature on a topic chosen in consultation with the instructor. Repeatable. Prerequisites: BIOL 204 or 211, CHEM 212 and instructor's consent.

BIOL 626. Reproductive Biology (3). Covers the basic organization and function of vertebrate reproductive systems. Includes current concepts and contemporary research from the molecular to the population level. Students earning graduate credit prepare a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisites: BIOL 204 or 211, CHEM 212 and instructor's consent.

BIOL 630. Behavioral Ecology (3). Studies the biological basis of social behavior, stressing the underlying evolutionary and ecological mechanisms. Lectures examine altruism and kin selection, kin recognition mechanisms, sexual behavior, sexual selection and mate choice, mating systems, and reproductive strategies from the perspective of natural selection. Students earning graduate credit write a term paper based on the technical literature and present this in a class seminar. Prerequisite: BIOL 418.

BIOL 640. Topics in Zoology (3–4). Selected offerings in zoology. Consult the Schedule of Courses for the current offerings. Students wishing to enroll in courses not listed in the current schedule must complete a Directed Independent Study Abstract form and obtain approval prior to enrollment. Students earning graduate credit produce a term paper based on the technical literature on a topic chosen in consultation with the instructor. Repeatable. Prerequisites: BIOL 204 or 211, CHEM 212 and instructor's consent.

BIOL 660. Topics in Microbiology (2–3). See BIOL 610. Prerequisites: BIOL 330 and instructor's consent.

BIOL 666. Special Topics in Biochemistry (3). Primarily for students who choose the biochemistry field major. Discusses a small number of current problems in biochemistry in depth. Requires reading published research papers in the field. Students earning graduate credit produce a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisites: BIOL 204 or 211, CHEM 662 and 663.

BIOL 669. Research in Biochemistry (2). Cross-listed as CHEM 669. Primarily for students who choose the biochemistry field major. Requires participation in a biochemistry research project under the direction of a faculty member and a written report summarizing the results. May be repeated once for credit. S/U grade only. Prerequisites: BIOL 420 and CHEM 662 or 663, and CHEM 664 and instructor's consent.

BIOL 710. Glycobiology (3). Introduction to glycoprotein biosynthesis, structure, and function. Covers the various roles of carbohydrates in modifying protein structure and function. Students earning graduate credit produce a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisite: BIOL 420.

BIOL 730. Cancer Biology (3). The basic mechanisms of carcinogenesis are covered by discussing the control of normal and abnormal cell growth in several model systems. Students earning graduate credit also submit a term paper dealing with a specific topic to be determined by discussion with the instructor. Prerequisite: BIOL 420.

BIOL 737. Aquatic Toxicology (3). The qualitative and quantitative study of the fate and effects of toxic agents in the aquatic environment. Class examines the concentrations or quantities of chemicals that occur in the aquatic environment. Includes a detailed study of the transport, distribution, transformation, and ultimate fate of various environmentally important chemicals. Class is for undergraduate or graduate students interested in advanced training in toxicology. Prerequisites: BIOL 418 or equivalent and CHEM 531 or equivalent, or instructor's consent.

BIOL 738. Plant and Animal Interactions (3). Develops and expands basic ecological and evolutionary concepts presented in earlier biology courses including natural selection, coevolution, population growth, and factors structuring ecological communities. Applies these concepts to the study of herbivory, pollination by animals, and seed dispersal by animals. Designed to improve students' abilities to read current primary scientific literature critically with particular emphasis on identifying and evaluating evidence for hypotheses in ecology and evolutionary biology. Introduces the peer review process and hones students' scientific writing skills. Students write a mini-review article of a current hypothesis in the field of plant-animal interaction. An oral presentation based on the findings of the mini-review is also required. Prerequisites: BIOL 418 or equivalent general ecology course.
BIOL 740. Topics in Graduate Biology (2–4).
Lecture, laboratory, field techniques, selected readings, or discussion course pertaining to a specific biological topic not available in the regular curriculum. May include oral presentations(s) and/or written paper(s). Topics are developed by individual faculty members and reflect current topics, in-depth analysis, and biological specialties. May be taken more than once for credit up to 6 hours. Prerequisite: any of the following three courses: BIOL 418, 419, 420; and instructor’s consent.

BIOL 760. Experimental Molecular Biology (4). 2R, 6L. Introduces upper-level undergraduate and graduate students to molecular biology techniques. The methodology primarily involves the manipulation of DNA and the expression of genetic material in prokaryotic and eukaryotic systems. Prerequisite: BIOL 419 or 420.

BIOL 767. Mechanisms of Hormone Action (3). The mechanism of action of several hormones is described and used to illustrate the major intracellular signal transduction pathways. Includes gonadotropin-releasing hormone, the glycoprotein hormones, luteinizing hormone, follicle-stimulating hormone, chorionic gonadotropin, thyroid-stimulating hormone, steroid hormones, thyroid hormone, activin/inhibin, prostaglandins, insulin, and growth hormone. Mostly lectures covering signal transduction pathways. Students write brief summaries of recent research papers related to the current week’s lecture topics. Each student makes an oral presentation of a research paper in journal club format. Students earning graduate credit write a term paper describing in detail a hormone not described in class and its mechanism of action. Prerequisites: BIOL 420 and CHEM 662 or their equivalents, plus either BIOL 534 or 526 or their equivalents, and instructor’s consent.

BIOL 780. Molecular Genetics (3). Studies the physiochemical nature of genetic material and the mechanisms of genetic regulation of metabolism. Students earning graduate credit produce a term paper and deliver a class seminar based on the technical literature on a topic chosen in consultation with the instructor. Prerequisite: BIOL 419.

BIOL 797. Departmental Seminar (1). Forum for the weekly presentation and discussion of the ongoing research projects performed by departmental faculty, graduate students, and guest scientists from outside departments and institutions. All MS degree-bound graduate students are required to attend the seminar each semester and must enroll for credit during the two semesters in which they give presentations that are the basis for their grade. One of these presentations may be their thesis defense. Prerequisite: acceptance into MS program.

Courses for Graduate Students Only

BIOL 890. Research (2–5). Students performing research on their thesis project should enroll for an appropriate number of hours. An oral presentation of the research results must be presented to the student’s thesis committee before a grade is assigned. S/U grade only.

BIOL 891. Thesis (2). Students must be enrolled in this course during the semester in which the thesis is defended. S/U grade only.

Chemistry (CHEM)

Graduate Faculty

Distinguished Professor: William C. Groutas (WSU Foundation Distinguished Professor of Chemistry)

Professors: Dennis H. Burns (graduate coordinator), Francis D’Souza, David M. Eichhorn (chairperson), D. Paul Rillena, William T.K. Stevenson, Erach R. Talaty, Kandatege Wimalasena, Melvin E. Zandler

Associate Professor: Michael J. Van Stipdonk

Assistant Professor: James G. Barn, Douglas S. English

The department of chemistry at Wichita State offers courses of study leading to the Master of Science (MS) and the Doctor of Philosophy (PhD) degrees in the areas of biochemistry, analytical, inorganic, organic, physical, and polymer chemistry.

Admission Requirements

To enroll in the graduate program in chemistry, students must follow the admission procedures required by the Graduate School. The chemistry department requires a baccalaureate degree in chemistry, a grade point average of at least 3.000/4.000 (both overall and in chemistry), two letters of recommendation from individuals familiar with the applicant’s academic background, a one-page typed statement of goals and research interests, and submission of test scores from the general GRE exam. The department strongly recommends test scores from the chemistry subject GRE as well. International students must have a minimum TOEFL score of 550 paper-based, 213 computer-based, or 79 Internet-based, or an overall band score of 6.5 on the IELTS. Applicants whose transcripts do not explicitly list the chemistry courses which they have taken must submit an official description of the courses which comprise their chemistry degree. Students deficient in any of the requirements may be admitted conditionally provided they follow the specified procedures required to remove any deficiencies.

Applications are reviewed as completed throughout the year.

Assessment Exam Requirements for the MS and PhD Degrees

All entering Master of Science and Doctor of Philosophy students are required to take analytical, inorganic, organic, physical chemistry, and biochemistry assessment exams in their first semester in the program. Both MS and PhD students must receive a pass or remove deficiencies in four of the subject areas listed above within the first year in the program. Deficiencies may be removed by enrolling in an appropriate course designated by the Graduate Affairs Committee and passing with a B or better grade. Assessment exams are given three times a year—fall, spring, and summer.

Master of Science Requirements

The MS degree in chemistry requires the completion of 30 credit hours, including the presentation of a thesis based on original research. The program requires at least 6 credit hours in research, CHEM 890. Also, at least 15 credit hours in chemistry courses numbered above 701 must be taken, including Instrumental Methods for Research (CHEM 734) and at least three of the graduate chemistry core courses (CHEM 715–723). Students must complete one enrollment in Chemistry Seminar (CHEM 700) and must enroll in Chemistry Colloquium (CHEM 701) each semester of their degree program. Additional courses are selected by students in consultation with their major adviser and the department’s graduate affairs committee.

Thesis. The thesis is reviewed by a committee from the department, and an oral examination given by a faculty committee appointed by the Graduate School must be passed.

Students must select a faculty member to be their research adviser by the beginning of their second semester in the graduate program.

Doctor of Philosophy Requirements

All PhD students are required to take 24 hours of graduate chemistry courses comprised of core courses and focused courses. The required core courses for the PhD include Advanced Spectroscopy I (CHEM 715), Modern Synthetic Methods (CHEM 719), Advanced Biochemistry (CHEM 721), Advanced Physical Chemistry (CHEM 723), and Instrumental Methods for Research (CHEM 734). The remaining 9 hours may be satisfied by Advanced Spectroscopy II (CHEM 717) and/or two to three focused courses numbered above 701. Students must complete two enrollments in Chemistry Seminar (CHEM 700) and must enroll in Chemistry Colloquium (CHEM 701) each semester of their degree program. Students must pass six cumulative examinations out of 16 attempts to remain in the program. During their fifth semester, students must develop and orally defend an original research proposal. After passing the cumulative exams and successfully defending the original research proposal, the student will have qualified as a candidate for the PhD in chemistry and must be enrolled in at least 2 hours of Research (CHEM 990) each semester for the duration of the program. The final requirement for the degree is the defense of a dissertation based on
original research. Well-prepared entering students should be able to complete the requirements within four years.

**Dissertation.** The dissertation is reviewed by a committee from the department, and an oral examination given by a faculty committee appointed by the Graduate School must be passed. Students must select a faculty member to be their research adviser by the beginning of their second semester in the graduate program.

Students in the PhD program in good standing, who have completed all required courses, have satisfactorily presented their departmental research seminar, have defended their creative research proposal, and have satisfied all other requirements for admittance to candidacy for the PhD degree, will upon request and approval by the student's committee be awarded the MS degree.

**Courses for Graduate/Undergraduate Credit**

**CHEM 514. Inorganic Chemistry (3).** Basic inorganic chemistry emphasizing molecular symmetry and structure, fundamental bonding concepts, ionic interactions, periodicity of the elements, systemsatics of the chemistry of the elements, acid-base chemistry and non-aqueous solvents, classical coordination chemistry, and introductory bioinorganic chemistry. Prerequisite: CHEM 212 with a grade higher than C. CHEM 531 strongly suggested but not required.

**CHEM 523. Analytical Chemistry (4).** 2R; 6L. Lab fee. Evaluation of data, theory and application of gravimetric analysis and precipitation, neutralization, and oxidation-reduction volumetric analysis. Prerequisite: CHEM 212 with a grade higher than C.

**CHEM 524. Instrumental Methods of Chemical Analysis (4).** 2R; 6L. Lab fee. Introduction to spectroscopic techniques (UV-Visible atomic absorption, molecular absorption, infrared, mass spectrometry and NMR), electrochemical techniques (potentiometry, voltammetry and coulometry) and separation techniques (gas chromatography and HPLC). Applications of computer and automated methods of analysis also covered. Prerequisite: CHEM 523 and 531 with a grade higher than C. CHEM 532 strongly recommended but not required.

**CHEM 531. Organic Chemistry I (5).** 3R; 6L. Lab fee. Introduction to the study of carbon compounds emphasizing reaction mechanisms, stereochemistry, and spectrographic analysis. Credit is not allowed for both CHEM 531 and 535. Prerequisite: CHEM 212 with a grade higher than C.

**CHEM 532. Organic Chemistry II (5).** 3R; 6L. Lab fee. A continuation of CHEM 531 emphasizing the structure and reactions of principal functional groups and compounds of biological interest. Credit is not allowed for both CHEM 532 and 536. Prerequisite: CHEM 531 with a grade higher than C.

**CHEM 533. Elementary Organic Chemistry (3).** A one semester survey of organic chemistry, examining various classes of organic compounds, organic reactions, and reaction mechanisms. The goal of the course is to establish an understanding of the relationship between structure and reactivity, with particular emphasis on the importance of organic chemistry to the health sciences and bioengineering. Credit is not allowed for both CHEM 533 and 531. This course does not meet the needs of chemistry majors or premed students. Prerequisite: CHEM 212 with a grade higher than C.

**CHEM 535. Organic Chemistry I (3).** Introduction to the study of carbon compounds emphasizing reaction mechanisms, stereochemistry, and spectrographic analysis. Credit is not allowed for both CHEM 535 and 531. This course does not include a lab, is open only to bioengineering majors and does not meet the needs of chemistry majors or premed students. Prerequisite: must be a bioengineering major and have completed CHEM 212 with a grade higher than C.

**CHEM 536. Organic Chemistry II (3).** Continuation of CHEM 535 emphasizing the structure and reactions of principal functional groups and compounds of biological interest. Credit is not allowed for both CHEM 536 and 532. This course does not include a lab, is open only to bioengineering majors and does not meet the needs of chemistry majors or premed students. Prerequisite: must be a bioengineering major and have completed CHEM 531 or 533 with a grade higher than C.

**CHEM 545. Physical Chemistry I (3).** Introduction to the fundamentals of thermodynamics with the goal of understanding the driving forces behind chemical and physical changes and equilibria. Covers the laws of thermodynamics and explores concepts involving heat and simple mechanical processes. Helmholtz and Gibbs energy are introduced as thermodynamic indicators of spontaneity/equilibria. The last portion of the course applies these concepts to the study of phase changes, chemical equilibria, ideal and non-ideal solutions, electrolytes and chemical kinetics. Replaces CHEM 546. Prerequisite: CHEM 212 with a grade higher than C, one year of college physics, and MATH 344 or its equivalent.

**CHEM 546. Physical Chemistry II (3).** Covers elementary quantum mechanics and its applications to chemistry. Begins with a historical comparison between classical and quantum mechanics, then builds from the postulates of quantum mechanics to explore the Schrödinger equation and its use in solving problems involving particles, rotating bodies and vibrations. Special emphasis on spectroscopy and approximation methods relevant to chemistry. Prerequisites: CHEM 212 with a grade higher than C, one year of college physics, and MATH 344 or its equivalent.

**CHEM 547. Physical Chemistry Laboratory (2).** 6L. Lab fee. Laboratory experiments and exercises that reinforce physical chemistry concepts of thermodynamics, equilibrium, spectroscopy and error analysis. Students gain practical, hands-on experience with computerized data acquisition and learn computational techniques for data reduction and analysis. Pre- or corequisite: CHEM 545 and 546.

**CHEM 603. Industrial and Polymer Chemistry (3).** Bridges the industrial-academic gap. Includes petroleum refining processes and distillation technology. Inorganic topics include glass technology, electro-refining and electroplating, and battery chemistry. Discusses cellulose (biomass)-based products such as gelling polysaccharides and natural fibers along with industrial adhesives (clays, resins, ion exchange resins, carbon blacks), and emulsion technology. Topics in polymer chemistry include ways of making polymers, resins, elastomers, and synthetic fibers; methods of polymer analysis, structure-property correlations (how structure influences physical properties) plastics recycling, and methods of plastics and composites processing. Pre- or corequisite: CHEM 532.

**CHEM 605. Medicinal Chemistry (3).** For students interested in chemistry related to the design, development, and mode of action of drugs. Describes those organic substances used as medicinal agents and explains the mode of action and chemical reactions of drugs in the body; illustrates the importance and relevance of chemical reactions as a basis of pharmacological activity, drug toxicity, allergic reactions, carcinogenicity, etc; and brings about a better understanding of drugs. Includes transport, basic receptor theory, metabolic transformation of drugs, discussion of physical and chemical properties in relation to biological activity, drug design, structure-activity relationships, and discussion of a select number of organic medicinal agents. Prerequisite: CHEM 532 or equivalent; a semester of biochemistry (CHEM 661 or 662) and a year of biology are strongly recommended.

**CHEM 615. Advanced Inorganic Chemistry (3).** Includes modern bonding theories, structure and spectra of inorganic compounds, coordination and organometallic chemistry, boranes, inorganic ring systems and polymers, inorganic environmental chemistry, mechanisms of inorganic reactions, and solid state chemistry. Prerequisites: CHEM 514 and 546.

**CHEM 616. Inorganic Chemistry Laboratory (2).** 6L. Lab fee. Experimental methods of inorganic chemistry. Pre- or corequisite: CHEM 615.

**CHEM 661. Introductory Biochemistry (3).** An introductory course for chemistry majors including chemistry/business majors and students in life science. Not recommended for the BS in chemistry—premedicine or biochemistry field majors for whom CHEM 662 and 663 are required. Introduces thermodynamics and biological oxidation-reduction reactions; structure, metabolism, and synthesis of proteins, carbohydrates, lipids, and nucleic
acids; enzyme kinetics, photosynthesis, and transfer of genetic information. Prerequisite: CHEM 532, or 536.

CHEM 662. Biochemistry I (3). Study of major constituents of the cell: protein, carbohydrate, glycoprotein, lipid, nucleic acid, nucleoprotein; enzyme catalysis; biological oxidations; photosynthesis; and introduction to intermediary metabolism. A fundamental background of biology or microbiology is recommended but not essential. Prerequisites: CHEM 523 and 532 or equivalents.

CHEM 663. Biochemistry II (3). Study of metabolism and control of carbohydrates, lipids, phosphoglyceraldehydes, spiroplasts, steroids, amino acids and proteins; synthesis of porphyrins, amides and polyamines; synthesis and metabolism of purines, pyrimidines, and nucleotides; synthesis and structure of DNAs, RNAs and proteins; organization and functioning of genes; evolution of proteins and nucleic acids; hereditary disorders of metabolism; biochemistry of endocrine glands; major nutrients and vitamins; body fluids and generalized tissues. A fundamental background of biology or microbiology is recommended but not essential. Prerequisite: CHEM 662.

CHEM 664. Biochemistry Laboratory (3). 1R; 6L. Lab fee. Practical training in biochemical procedures and literature searching. Experiments include isolation, characterization and assay of biomolecules and use of centrifugation, chromatography, electrophoresis, spectrophotometry, enzyme kinetics, and radioactive labeling techniques. Prerequisite: CHEM 532 or equivalent. Corequisite: CHEM 662 or CHEM 663.

CHEM 666. Special Topics in Biochemistry (3). Offered fall semester in even-numbered years. Discusses a small number of current problems in biochemistry in depth. Requires reading of published research in the field. Prerequisites: BIOL 211 and CHEM 662 and 663.

CHEM 669. Research in Biochemistry (2). Cross-listed as BIOL 669. Students in the biochemistry field major participate in a biochemistry research project under the direction of a faculty member. Requires a written report summarizing the results. May be repeated once for credit. S/U grade only. Prerequisites: BIOL 420 and CHEM 662 or 663, and CHEM 664 and instructor's consent.

CHEM 690. Independent Study and Research (2–3). Studies performed must be directed by a faculty member in the department of chemistry. Repeatable for credit. A maximum of 3 credit hours may be counted toward graduation. Prerequisite: departmental consent.

CHEM 700. Chemistry Seminar (1). Students give seminars on either papers recently published in the literature or on their own research. Repeatable for credit. S/U grade only.

CHEM 701. Chemistry Colloquium (1). Speakers for the colloquium consist of outstanding chemists from other institutions and faculty. Repeatable for credit. S/U grade only.

CHEM 704. Environmental Science Colloquium (1). Cross-listed as GEOL 704. Students in the master's program in environmental science are required to enroll each semester (maximum 4 credit hours). Includes presentations by guest speakers and required readings for class discussion. May also include student involvement in environmentally related community groups and projects.

CHEM 706. Environmental Science Internship (3–6). Cross-listed as GEOL 706. Students in the master's program in environmental science may gain interdisciplinary skills in environmental science by participating in applied and/or basic research internship projects with local business, industry, or government agencies. Internship option is an alternative to thesis research for degree requirements. Enrollment in internship projects requires an approved proposal. Completion of an internship for graduation requires a formal oral presentation of the internship activity and a written report. Prerequisites: CHEM 702 and 703.

CHEM 709. Special Topics in Chemistry (2–3). Discussion of topics of a special significance and interest to faculty and students. Offerings announced in advance. Repeatable for credit.

CHEM 712. Coordination Chemistry (3). The study of the synthesis, characterization, and properties of coordination compounds. Includes nomenclature, fundamental bonding concepts, principles of synthesis, mechanisms of substitution and electron transfer reactions, catalysis, and solid-state phenomena. Prerequisite: CHEM 615 or equivalent.

CHEM 713. Physical Methods in Inorganic Chemistry (3). An introduction to electronic and vibrational spectroscopy, magnetic susceptibility, EPR, NMR, Mossbauer spectroscopy, and X-ray crystallography as applied to inorganic systems. Emphasis on interpretation of results for understanding the electronic and molecular structure of compounds.

CHEM 715. Advanced Spectroscopy I (3). An introduction to 1H and 13C NMR spectroscopy including basic concepts such as integration, chemical shifts, di-magnetic shielding, magnetic anisotropy, spin-spin coupling (first and second-order), coupling constants, proton decoupling 13C NMR interpretation of 1H and 13C NMR spectra. More advanced topics include NOE and protein structural mapping, and multidimensional techniques such as COSY, DEPT, INEPT, molecular motion by NMR, coupling to 13C metal centers, including those with >100 percent natural abundance; virtual coupling in metal complexes, NMR of paramagnetic systems and use of paramagnetic shift reagents. An introduction to mass spectroscopy including instrumentation—magnetic sector, quadrupole, ion trap, MS-MS; sample preparation and interfaces—GC-MS, LC-MS, electrospray, MALDI; methods of ionization—electron impact, chemical ionization, electrospray, interpretation of mass spectra—basic concepts, fragmentation patterns. An introduction to the interpretation of mid-infrared spectroscopy of complex molecules and ionic compounds followed by the synthesis of results from NMR, MS and mid IR spectra to determine structure. Emphasis on interpretation of results for understanding electronic and molecular properties of chemical compounds related to their symmetry and structure.

CHEM 717. Advanced Spectroscopy II (3). An introduction to electronic and vibrational spectroscopy, EPR and magnetic properties of compounds. A study of the electric field interaction of radiation, electronic and vibrational spectroscopy, and the magnetic field interaction of radiation, EPR and magnetism, with molecular systems examining the different changes in state that molecules can undergo. Emphasis on interpretation of results for understanding electronic and molecular properties of chemical compounds related to their symmetry and structure.

CHEM 719. Modern Synthetic Methods (3). An introduction to modern synthetic methods in chemistry. A detailed investigation of the synthetic chemistry of anions is followed by a detailed study of functional group interconversions, then oxidation and reduction reactions. The topic of retrosynthetic analysis is introduced. Topics in inorganic synthesis include organometallic bonding and breaking reactions, ligand synthesis and replacement, solid state synthesis, and topics in bioinorganic synthesis.

CHEM 721. Advanced Biochemistry (3). An introduction to advanced biochemical concepts, processes, and techniques. A comprehensive survey of structure functions of biomolecules including proteins, nucleic acids, lipids and carbohydrates is carried out. Protein synthesis, DNA replication and translation, biological membrane and membrane transport are covered. Enzyme mechanisms and kinetics and protein structure/function are discussed in detail. Biochemical, molecular biological, biophysical, and chemical techniques that are commonly used in the study of biochemical processes are introduced and discussed.

CHEM 731. Physical Organic Chemistry (3). Discussion of advanced topics in stereochemistry and conformational analysis and organic reaction mechanisms. Prerequisite: CHEM 532.

CHEM 732. Advanced Organic Synthesis (3). Discussion of modern synthetic methods in organic chemistry, including carbon-carbon forming reactions, oxidation and reduction reactions, protective groups, and organometallic chemistry. Prerequisite: CHEM 532.

CHEM 734. Instrumental Methods for Research (3). Designed to prepare graduate students or other researchers to perform spectroscopy experiments relevant to their research. The identity of organic compounds can be determined by the information provided by several types of spectra: mass, infrared, nuclear magnetic resonance, fluorescence, and ultraviolet. Students learn to operate such instruments as the Varian 2200 GC/MS mass spectrometer, the Therm Nicolet Avatar FTIR spectrophotometer, the Varian Mercury 300 and Inova 400 NMR spectrometers, the Fluorolog fluorescence spectrophotometer and the Hitachi U-2010 and Varian Cary 100 UV-Vis spectrophotometers in the department's NMR and analytical facilities. The focus of this class is technique and not the interpretation of spectra. On successful completion of this course, students are authorized to use departmental instruments. Prerequisite: departmental consent.

CHEM 738. Structure Determination and Spectral Analysis of Organic Compounds (3). Discusses computational techniques, infrared, ultraviolet, nuclear magnetic and electron spin resonance and mass spectroscopy, and their practical use in structure determination. Prerequisite: CHEM 532.

CHEM 744. Computational Quantum Chemistry (3). An introduction to molecular orbital procedures and methods for calculating a wide range of physical, chemical, and electronic properties of systems large enough to be of interest to inorganic, organic, and biochemists. Using commercial molecular orbital software programs such as MOPAC, SPARTAN, and GAUSSIAN, students learn to select appropriate "model" computational
procedures to predict properties of molecules and reactions. By comparison with experiment, students learn to assess the range of applicability and accuracy of the "model" methods as applied to various categories of chemical systems. Properties considered include energies and structures of molecules, ions, and transition states; vibrational frequencies, IE, and RAMAN spectra; thermochromic properties, heat of formation, bond and reaction energies, isomerization energy barriers; reaction pathways; molecular orbitals, atomic charges, dipole and multipole moments, ionization potentials, bond orders; orbital energies and photelectron spectroscopy; excited state properties, singlet and triplet states. Prerequisites: CHEM 531 or equivalent (MATH 544 is necessary).

CHEM 751. Chain Growth Polymerization (3). Mechanisms, kinetic, and thermodynamic aspects of polymerization processes which proceed by a chain growth mechanism, free radical, anionic, cationic, and Zeigler Natta and group transfer polymerization. Prerequisites: CHEM 531 and 545.

CHEM 752. Step Growth Polymerization (3). Polymerization process which proceed by a step growth or ring-opening mechanism. Preparation of thermoplastics, including relationships between molecular weight and reaction condition. Preparation of thermosets including relationships between structure, conversion, and gelation. Discusses individual systems such as nylon, epoxy resin, and polyimides in detail. Prerequisites: CHEM 531 and 545.

Courses for Graduate Students Only

CHEM 809. Special Studies in Chemistry (2–3). Systematic study in selected areas of chemistry. Repeatable for credit. Course content differs from one offering to the next.

CHEM 815. Bioorganic Chemistry (3). The study of the role of inorganic chemistry in biological systems. Includes electron transport, biological catalysis mediated by metal ions, metal storage and transport, ion transport, and the role of transition metals in metabolism. Prerequisites: CHEM 615 and 663 or equivalents.

CHEM 823. Analytical Spectroscopy (3). Absorption (UV visible, IR, and atomic); emission: flame emission and atomic absorption spectrometry, molecular fluorescence, and phosphorescence methods; Raman, nuclear magnetic resonance, and electron spin resonance spectroscopy; X-ray methods. Lectures and discussions on theory and practice. Particular emphasis on instrumentation and the acquisition of artifact-free data. Prerequisite: CHEM 524 or equivalent.

CHEM 824. Electroanalytical Chemistry (3). Includes voltammetry, polarography, chromatography, and coulometry; reversible and irreversible diffusion controlled processes; CE (chemical reaction before electrical reaction), EC (electrical reaction before chemical reaction), and catalytic reaction; and organic polarography and voltammetry. Prerequisite: CHEM 524 or equivalent.

CHEM 835. Bioorganic Chemistry (3). Includes the chemistry of amino acids and peptides, enzyme structure and function, and inhibitor design. Prerequisites: CHEM 662, 663, and 732, or 662. Corequisites: CHEM 663 and 732.

CHEM 842. Chemical Kinetics (3). A description of reacting systems, including the mathematical and experimental characteristics of simple and complex kinetic systems. Discusses the theories of chemical kinetics, as well as the kinetics of homogeneous reactions in the gas phase, the kinetic aspects of solution reactions, heterogeneous reactions, and selected topics of current interest. Prerequisite: CHEM 545 or equivalent.

CHEM 843. Statistical Thermodynamics (3). Develops Boltzmann, Fermi-Dirac, and Bose-Einstein statistical mechanical applications with gaseous-state and solid-state chemical problems. Emphasizes the relationship of statistical mechanics and thermodynamics. Considers applications of statistical thermodynamics to polymers. Prerequisites: CHEM 545 and 845 or equivalents.

CHEM 852. Techniques of Polymer Characterization (3). A study of physical, spectroscopic, and diffraction techniques to determine the size, structure, and morphology of polymers.

CHEM 853. Polymer Properties (3). Kinetics and thermodynamics of the crystallization process and the influence of sample history on the gross morphology of the crystallites. Structural features which preclude the development of polymer crystals and encourage amorphous character, relationships between structure, Tm and Tg, theoretical strengths of materials, the time dependent mechanical behavior of polymers, and the Maxwell and Voigt models of viscoelasticity. The Boltzmann superposition principle and how it can be used to predict creep behavior, mechanisms of deformation, yielding and fracture in polymers. Prerequisite: degree in chemistry or related subject.

CHEM 861. Enzyme Mechanisms (3). An introduction to the study of enzyme mechanisms. Modern approaches include steady-state, relaxation, and chemical modification methods. Prerequisite: CHEM 662 or 663 or equivalent.

CHEM 863. Analytical Biochemistry (3). A review of modern analytical methods used in biochemistry and molecular biology including absorbance and fluorescence spectroscopy chromatography (affinity, gel-filtration, HPLC, ion-exchange, ion-pair), gel electrophoresis, radioactive tracer methods; cloning, sequencing, and recombinant DNA procedures. Prerequisites: BIOL 210 and 211 and CHEM 662 or 663 or equivalents.


CHEM 890. Research in Chemistry (2–12). Research for the student planning to receive an MS. Research is directed by a faculty member. Repeatable for credit. S/U grade only.

CHEM 990. Research in Chemistry (2–16). Research for the student planning to receive the PhD. Research is directed by a faculty member. Repeatable for credit. S/U grade only.

Communication, Elliott School of (COMM)

Graduate Faculty

Distinguished Professors: Deborah Ballard-Reisch (Kansas Health Foundation Distinguished Chair in Strategic Communication), Patricia Dooley (graduate coordinator and Betty and Oliver Elliott Professor of Communication) Professors: Philip Gaunt (director, Interdisciplinary Communication Research Institute), Sharon H. Iorio (Dean, College of Education)

Associate Professors: Les Anderson, Richard Armstrong, Dan Close, Kevin Hager, Susan S. Huxman (director, Elliott School) Assistant Professors: Lisa Parcell, Michael Wood

Master of Arts in Communication, Areas of Emphasis and Graduate Certificate

The Master of Arts in communication degree program at Wichita State is designed to provide students with a multidisciplinary foundation in human communication that will serve a broad spectrum of interests and needs in many fields of endeavor. The program is based upon integration and synthesis of academic resources in communication. Also available is a graduate (post-baccalaureate) certificate awarded for completing a group of related, upper-level skills courses in applied communication.

Admission Requirements

In addition to the general Graduate School admission requirements, applicants for full-standing status must have a 3.00 GPA over their last 60 hours of coursework, must submit results of the Graduate Record Exam, and must write a statement of purpose for pursuing the Master of Arts in communication. International students must score at least 600 paper-based, 250 computer-based, or 100 Internet-based on the TOEFL, or a minimum overall band score of 7.5 on the IELTS and, if applying for a graduate teaching assistantship, must score at least 55 on the TSE.

Degree Requirements

The Master of Arts in communication requires 36 hours of coursework—15 hours of core courses and 21 hours of electives. Students selecting the thesis option may count up to 6 hours of thesis credit toward the required 36-hour total.
COMM 801. Introduction to Communication Research (3).

COMM 802. Historical and Qualitative Methodologies in Communication Research (3).

COMM 803. Empirical/Quantitative Research Methodology in Communication (3).

COMM 812. Contemporary Theories of Communication (3).

COMM 850. Organizational Communication (3).

Other Courses. In addition to the required courses, students, with the advice and consent of their faculty adviser, must select courses to complete the plan of study, as discussed in the Graduate School chapter of the Graduate Catalog. The plan of study will be individually designed to accommodate a student's background, interests, and needs and must include a minimum of 60 percent of their graduate hours at the 700–899 level.

Examinations
Written comprehensive examinations will be administered to all candidates during the final semester of their degree program. In addition, students writing a thesis will present an oral defense of the thesis.

Graduate Certificate in Applied Communication
Designed for students who want concentrated study in communication skills, the graduate certificate in applied communication is awarded for the successful completion of a program totaling 14 credit hours of graduate coursework selected from a prescribed subset of courses. The curriculum is integrated by a 2-hour foundation course and a more advanced course in organizational communication. The remaining 9 credit hours of coursework are chosen from a group of elective courses in speaking, writing, and visual communication. An applicant for the program must meet WSU Graduate School nondegree category A requirements. In addition, students whose first language is not English must achieve a TOEFL score of at least 600 paper-based, 250 computer-based, or 100 Internet-based.

Courses for Graduate/Undergraduate Credit
COMM 500. Advanced Reporting (3). 1R; 4L. For juniors and seniors; the techniques of reporting and writing the more complex and important types of news stories. Covers police beat stories, sports, and economic reporting; includes the study and practice of journalistic interviewing. Prerequisites: junior standing, COMM 301 with a C or better, and either 401 or 422.

COMM 502. Public Information Writing (3). Uses basic journalistic skills of clear, precise writing to communicate effectively with various audiences. Students write press releases, speeches, and popularizations of complex documents. Techniques learned are valuable in writing grant proposals, committee reports, pamphlets, and journal articles. Prerequisites: COMM 301 with a C or better, junior standing, or departmental consent.

COMM 510. Editing for Print (3). Selection, evaluation, and preparation of copy and pictures for publication. Covers copy editing, rewriting, headline and caption writing, and page layout. Prerequisites: junior standing and COMM 301 with a C or better.

COMM 511. Strategic Communication in Organizations (3). Emphasizes the importance of effective communication in building meaningful relationships, grooming civic leadership and producing marketable employees. Human communication skills taught include: how to give effective presentations, facilitate small group discussions, handle conflict, manage diverse constituencies at various levels: organizational, interpersonal, small group, and public; and contemporary topics and issues. Prerequisite: COMM 130 or instructor's consent.

COMM 525. Advertising Copywriting (3). Detailed practice at writing various kinds of advertising copy, including print and broadcast forms. Emphasizes terse, precise writing that evokes response sought by advertiser. Prerequisites: COMM 324 and COMM 301 with a C or better or departmental consent.

COMM 526. Media Buying and Selling (3). Principles, methods, and strategies of buying and selling media for advertising, including study of reach and frequency of the various mass media and specialized media, budgeting, research, rates, market share, and other tools of current buying and selling strategies. Prerequisite: COMM 324 or instructor's consent.

COMM 555. Communication Analysis and Criticism (3). General education further study coursework. Introduces the methods used for the analysis and critique of various linguistic, pictorial, and aural elements of communication to become more discerning consumers of the various forms of public and mass-mediated messages. Analysis includes print advertisements, radio and television messages, newspaper features, and public speeches. Prerequisites: junior standing and COMM 301 with a C or better or instructor's consent.

COMM 550. Opinion Writing (3). Studies editorial judgment, including practice in writing print, broadcast, and electronic opinion pieces, and examining traditional and new technology research materials available to opinion writers. Prerequisites: COMM 301 with a C or better and junior standing.

COMM 571. Feature Writing (3). Writing features for newspapers and magazines. Nonfiction topics may include personal experience essays, consumer pieces, travel articles, and personality profiles. Prerequisites: COMM 301 with a C or better and junior standing.

COMM 581. Communication Practicum (1–3). Application of theory, principles, and practices to professional settings where students work under instructor supervision to continue their professional preparation in various areas of media and communication. Prerequisites: COMM 301 and instructor's consent.

COMM 604. Video Storytelling (3). Application of video equipment and techniques for field productions. Execution of visual and audio expression in relation to effective video productions in a field setting. Prerequisite: COMM 304 or instructor's consent.

COMM 609. Interactive Media Production (3). Investigation and application of production techniques for educational and instructional broadcasting, emphasizing television. Prerequisite: COMM 304.

COMM 612. Scholastic Journalism Instructional Strategies (3). Assists those who are preparing to advise and teach students who currently supervise a student newspaper or yearbook. Emphasizes techniques for teaching various forms of writing and design, duties relating to production and finance of school publications, and methods to help students become better communicators. Prerequisite: COMM 301 with a C or better or instructor's consent.

COMM 622. Studio B: Live Television News (3). Reporting and writing about events in the university and community. Story assignment and preparation under the instructor's guidance; story broadcast over WSU Cable Channel 13. May be repeated for credit with adviser's consent. Prerequisite: COMM 422 or instructor's consent.

COMM 626. Integrated Marketing Communications Campaigns (3). Instruction and practice in planning and developing integrated advertising and public relations campaigns. Teaches students to perform a situation analysis, identify objectives, develop strategies and tactics, and write a plans book, as well as produce advertising and public relations campaign materials. Prerequisites: COMM 324 and 525 or instructor's consent.

COMM 630. Communication Law and Responsibility (3). Emphasizes both oral and written aspects of communication law and responsibility. Addresses general functions of the law including the right to communicate, broadcast law, and law of the press. Includes discussion of First Amendment rights, libel, privacy, copyright, advertising, obscenity, pornography, and corporate communication concerns. Prerequisite: COMM 301 with a C or better or instructor's consent.

COMM 631. Historical and Theoretical Issues in Communication (3). Examines the development of various issues in communication in historical context. Emphasizes different humanistic and scientific theories of communication and the historical development of mediated communication. Uses selected theories to generate critiques of specific communication events. Prerequisites: junior standing and COMM 130 or instructor's consent.

COMM 633. Senior Honors Project (3). For undergraduates seeking departmental honors in communication. An individual written and oral project, including a review of literature, methodology, and critical analysis on a communication topic approved by the instructor. Prerequisites: senior standing; minimum GPA of 3.500; COMM 430, 535, 630, 631; and departmental consent.

COMM 635. Leadership Techniques for Women (3). Cross-listed as WOMS 635. Provides the female student experience in decision making and improves skills in leadership through role playing and exercise in group dynamics.

COMM 636. Advanced Public Speaking (3). Skills development in a variety of advanced presentational methods, including speaking from a TelePrompter, using
COMM 640. Issues in Corporate Communication (3). Examines how corporations craft messages that are persuasive to their various publics. Special attention to how companies use communication strategies to cope with situations that threaten their reputations.

COMM 650. Communication Training and Development (3). An examination of communication concepts, processes, technologies, and strategies related to training and development. Includes the application of these elements to formal instruction across disciplines and at various educational levels as well as in most professional training settings.

COMM 660. Seminar in Communication (1–3). Special seminars dealing with current problems, issues, or interests in various areas of communication. Repeatable for credit in different topics only.

COMM 661. Directing the Forensics Program (3). A study of the methods and procedures in coaching and directing the high school and collegiate forensic programs (debate and individual events). The future teacher is made aware of the literature and professional organizations in the field.

COMM 675. Directed Study (1–3). Cross-listed as THEA 675. Individual study or projects. Repeatable for credit with departmental consent. Prerequisite: departmental consent.

COMM 690. Communication Internship (1–2). Credit for professional experience that integrates theory with a planned and supervised professional experience designed to complement and enhance an academic program. Individualized programs must be formulated in consultation with, and approved by, appropriate faculty sponsors. May be repeated, but limited to a total of 4 credits in COMM 481 and COMM 690. Graded CR/NC. Prerequisite: departmental consent.

COMM 712. Advanced Interpersonal Communication (3). Advanced exploration of concepts and variables in interpersonal communication through the study of different theories as well as practical experiences in dyadic and small-group communication. Prerequisite: COMM 302 or instructor’s consent.

COMM 720. Dimensions of Mass Communication (3). A detailed study of mass media, their role as social institutions; their control, support, content, and audience; and their effects.

COMM 722. The Art of Conversation (3). Conversation is the form of communication people engage in most naturally and frequently, but about which they seldom think seriously. Helps participants enhance their understanding and appreciation of, as well as their skill in, the art of conversation. Includes the nature of conversation, principles of conversational communication, types of conversation, conversation in the media, and conversation analysis. Prerequisites: COMM 302 and junior standing or departmental consent.

COMM 750. Workshops in Communication (1–4).

COMM 760. Seminar in Communication (1–3). Special seminars dealing with current problems, issues or interests in various areas of communication. Repeatable for credit in different topics only.

COMM 770. The Audience (3). Application of research techniques to the measurement of audience behavior emphasizing mass media audiences. Includes focus group interviews, survey research, and radio and television ratings.

Courses for Graduate Students Only

COMM 801. Introduction to Communication Research (3). An integrative approach to an understanding of the nature and scope of communication research and graduate studies in communication and theatre/drama. Provides an overview of current research in the discipline. Instruction in the basic steps of research; availability of library and other sources; bibliographic search; computer accessing of source materials; organization, style, and format of a research report and citation of sources in accordance with standard style guides. Should be taken at the beginning of the graduate program.

COMM 802. Historical and Qualitative Methodologies in Communication Research (3). An introduction to historical, critical, and observational methodologies in communication research. Emphasizes historical, critical, and observational research, particularly those forms of research common to communication studies. Prerequisite: COMM 801.

COMM 803. Empirical/Quantitative Research Methodology in Communication (3). An introduction to empirical research methods in communication. Emphasizes both experimental and nonexperimental research, particularly those forms of research common to communication studies. Studies research design, methods, and reporting techniques. Prerequisite: COMM 801.

COMM 812. Contemporary Theories of Communication (3). Studies selected conceptual models useful in the academic study of human communication, including theories involving such contexts as interpersonal communication, public communication, and mass communication.

COMM 820. Investigation and Conference (1–3). Cross-listed as THEA 820. Directed research and experimentation for graduate students in some phase of (a) speech communication, (b) electronic media, or (c) speech education. Repeatable for credit up to a total of 6 hours.

COMM 825. Group Communication (3). Examines communication processes that operate in groups in various contexts. Provides an overview of relevant theory, as well as methodologies through which group communication may be critically analyzed in applied settings.

COMM 860. Seminar in Communication (1–3). Special seminars dealing with current problems, issues, or interests in various areas of communication. Repeatable for credit in different topics only.

COMM 865. Organizational Communication (3). Cross-listed as MGMT 865. An analysis of communication models emphasizing their applications to communication problems in organizations. Explores social psychological processes underlying persuasion in interpersonal relations and through mass media. Critically analyzes communication systems and techniques within formal organizations.

COMM 870. Directed Study (1–3). Individual study or projects. Repeatable for credit with departmental consent. Prerequisite: departmental consent.


Community Affairs, School of

Criminal Justice (CJ) Graduate Faculty

Professors: Andrea Bannister (director, RCPTI), Paul Cromwell, Michael Palmiotto

Associate Professors: Michael Birzer (director, School of Community Affairs and graduate coordinator), Ronald G. Iacovetta, Delores Craig-Moreland, Martha Smith, Allison McKenney-Brown (director, MCJI; coordinator, forensic sciences program)

Admission Requirements

The Master of Arts in criminal justice (MACJ) at Wichita State University is housed in the School of Community Affairs. It is one of the nation’s oldest criminal justice graduate degree programs. Intended to advance learning beyond the more general undergraduate educational curriculum, the MACJ expands the knowledge base of both graduating seniors and the administrative capacity of working professionals to optimally perform in their chosen careers in criminal justice. In addition to the Graduate School admission requirements, applicants must submit: (1) three letters of reference from people acquainted with the applicant’s background and potential; and (2) a brief autobiographical statement describing particular interests, experiences and goals related to academic and professional work in criminal justice.
Applicants are evaluated with respect to (1) undergraduate grade point average (a minimum GPA of 3.00 based on the last 60 hours is required for consideration of admission to degree status); (2) amount, type and scope of undergraduate preparation; and (3) reference letters.

Final recommendation on a candidate’s admission to the MACJ program is made to the Graduate School by the graduate coordinator of the criminal justice program.

**Degree Requirements**

Students pursuing the MA degree in criminal justice may follow either a thesis or non-thesis option. Both program options require a minimum of 36 hours, including 24 hours taken in courses numbered 700 or above.

**Core Curriculum**. All degree candidates are required to complete CJ 802, 893, 894, and 897 with a grade of B or better in each course. All core courses should be completed in the first two semesters of study. Students selecting the thesis option may count up to 6 hours of thesis credit toward the required 36-hour total.

**Examinations**

Students selecting the thesis option must pass an oral defense of the thesis.

**Courses for Graduate/Undergraduate Credit**

**CJ 501. Integrity in Public Service (3).** Cross-listed as PADM 501. Exposes students to basic principles of personal and professional integrity and how these principles apply to their daily lives as a members of the community and as employees of a government or social service agency. Employs a case study method, using cases and examples from a wide range of government and non-agency. Employs a case study method, using cases and examples from a wide range of government and non-profit agency experiences. Students become aware of the moral and ethical issues which may arise in their professional and personal lives; begin to develop critical thinking and analytical skills regarding ethical behavior; and become more personally and professionally responsible. Prerequisite: junior or senior level or instructor’s permission.

**CJ 513. Violent Crime (3).** Examines the extent, causes and policy implications of violent crime. Begins with a review of the rates of violent crime in various parts of the U.S. Provides students with some direct experience of violence such as an emergency room observation period or a panel of victims of violence. Course also covers the theoretical approaches of violent crime as well as factors related to violence among strangers vs. families. Critical reviews of various policy responses to violence, including their likelihood to prevent or reduce violent crime are required. Prerequisite: CJ 191.

**CJ 515. Sex Crimes (3).** Examines and defines what are classified as criminal forms of sexual behavior and the unique challenges they present to the criminal justice system. Examines the extent and nature of sex crimes, sexual predator laws, sexual harassment and the victims of such crimes. Discusses the theoretical developments in the field. Prerequisite: CJ 191.

**CJ 516. Profiling (3).** Familiarizes students with the methods used to profile violent crimes, including homicide, rape, arson and burglary. Includes scope of the problem in each of these crimes, typical investigation sequence and the role of profiling up to the trial preparation stage. Prerequisite: CJ 191.

**CJ 517. Homicide Investigation (3).** Introduction to death investigations from an investigation-oriented perspective. Emphasis is given to crime scene investigations, mechanisms of injury and death and sex-related homicides. Prerequisite: CJ 191.

**CJ 518. Criminal Justice & Crime in Film (3).** Presents films and associated popular cultural materials related to the criminal justice system and crime. The genre of the crime film has become an important component of contemporary culture. The course begins with basics of film criticism and provides students with instruction on elements of a film genre. American and European films are considered.

**CJ 541. Medical and Legal Aspects of Death Investigation (3).** Emphasizes the manner, cause, and mechanism of death; physiological effects of trauma; postmortem changes; identification techniques; investigation of child deaths; and the components of a complete death investigation. Considers and analyzes the history, function, and responsibilities of the coroner/medical examiner. Prerequisite: CJ 191.

**CJ 551. Workshop (1–6).** Specialized instruction using variable formats in relevant criminal justice subjects. Repeatable for credit up to 6 hours.

**CJ 593. Crime Causation and Criminal Justice Policy (3).** Introduction to theoretical issues in criminal justice. Primary emphasis is the etiology of criminal and delinquent activity and the response of the criminal justice system to such behavior. Discusses the significant contributions of outstanding criminologists, as well as elaborating the application of these perspectives to criminal justice agencies. Prerequisite: CJ 191.

**CJ 598. Contemporary Issues in Criminal Justice (3).** A capstone course for criminal justice majors nearing the completion of the baccalaureate degree. Examines current criminal justice issues and integrates material learned in the criminal justice curriculum. Covers theories of crime and delinquency, origins and development of criminal law and procedure, functions and operations of criminal justice agencies in America, including the response to juvenile offenders; prevention of crime and delinquency, privatization in corrections and policing the nature, meaning, and purpose of criminal punishment; the nature and impact of criminal justice policy, and the relationship between criminal justice and human diversity. Prerequisites: CJ 191, 391, 392, 394, 407, 593, and senior standing. For undergraduate criminal justice majors only.

**CJ 600. Forensic Anthropology (3).** Cross-listed as ANTH 600. Encompasses the area of criminal investigation involving biological evidence: blood, hair, fingerprint, dentition, and skeletal system. Covers procedures of collection, preservation, marking, transportation, referral, laboratory analysis, classification, and identification emphasizing anthropological interpretation. Prerequisite: 15 hours of criminal justice courses including CJ 191 or junior, senior, or graduate standing.

**CJ 610. Correctional Counseling (3).** Analysis of the role of a correctional counselor. Emphasizes current practices in community-based and institutional correctional counseling. Discusses application of theories of counseling which are widely used in correctional settings, rehabilitative programs, and special needs of offenders. Prerequisite: CJ 191.

**CJ 641. Forensic Psychiatry (3).** Analysis of the role of psychiatry in the criminal justice process. Introduces the student to concepts and procedures of forensic psychiatry. Prerequisite: 15 hours of criminal justice courses including CJ 191 or junior, senior, or graduate standing.

**CJ 643. Forensic Science (3).** An overview of the various sciences used in the forensic investigation of crime, including toxicology, drug identification, questionable documents, firearm and trademark identification, trace evidence analysis, fingerprint identification, forensic pathology, forensic serology, forensic odontology, and forensic anthropology. Prerequisite: 15 hours of criminal justice courses including CJ 191 or junior, senior, or graduate standing.

**CJ 651. Dispute Resolution (3).** Examines a range of topics including mediation, negotiations, arbitration, facilitation, and other dispute resolution techniques. Includes criminal and civil mediation and both inter-group and inter-organization relations and dispute resolution techniques. Analyzes case studies. Prerequisite: 15 hours of criminal justice courses including CJ 191 or junior, senior, or graduate standing.


**CJ 692. Community Policing (3).** Reviews the various models and strategies of community policing. Examines key concepts, such as problem-oriented policing, crime prevention, community relations, and empowering the community, and the integration of these concepts into community policing. Prerequisites: 15 hours of criminal justice courses including CJ 191 or junior, senior, or graduate standing.

**CJ 781. Cooperative Education (1–4).** Provides a field placement that integrates theory with a planned and supervised professional experience designed to complement and enhance the student’s academic program. Students work with a faculty member in the formulation and completion of an academic project related to the field experience. The cooperative education experience must be an integral part of the student’s graduate program. Individualized programs must be formulated in consultation with, and approved by, the cooperative education coordinator. Open only to CJ graduate students. Repeatable for credit. No more than 6 hours may be counted toward a plan of study. Enrollment limited to 4 hours per semester. Offered Gr/NCr only.

**CJ 782. Workshop in Criminal Justice (1–6).** Prerequisite: CJ 191 and instructor’s consent.

**CJ 783. Advanced Special Topics in Criminal Justice (1–3).** Detailed study of topics in criminal justice
with particular emphasis established according to the expertise of the various instructors. Prerequisites: CJ 191 and junior, senior, or graduate standing.

CJ 796. Criminal Typologies (3). Introduces an area of criminology that categorizes large amounts of informa-
tion into mutually exclusive categories. Analyzes the vari-
ous categories of crimes, the situations under which they are committed, the offenders who commit them, and the victims of those offenses. Examines the offenses of homicide, rape/sexual assault, aggravated assault, rob-
bery/armed robbery, burglary, auto theft/jarjacking, prostitution, drugs, gambling, cybercrime, white collar crime/occupational crime, arson, and hate crimes.

An overview of approaches to public policy analysis and
program evaluation. Examines the roles of participants in
public policy development, implementation, and evalua-
tion. Explores policy and program functions and their intended and unintended impacts. Examines methodolo-
gies for collection of data and their use in the assessment of programs and program impacts. Prerequisites: 15 hours of criminal justice courses including CJ 191 or junior, senior, or graduate standing.

Courses for Graduate Students Only

CJ 802. Quantitative Methods for Public Sector Pro-
fessionals (3). Cross-listed as GERO 802. Uses standard microcomputer statistical software and analysis to intro-
duce statistics and quantitative analysis for organizational
and policy decision making. Emphasizes the application of statistics and writing with quantitative evidence to real
public sector policy questions. Assumes little or no back-
ground in statistics and software applications.

CJ 817. Crime in Popular Culture (3). Analyzes film as
an expression of popular culture; focuses on films dealing
with the subject of crime. Particular attention to portrayal
of violence and the images of women. Discusses the
images of police, correctional officers, and other criminal
justice professionals.

CJ 820. Terrorism and Modern Societies (3). A broad
overview of the many theoretical approaches to the study of
terrorism. Studies recurring issues regarding the inter-
pretation of various types of terrorism. Focuses not only
on theoretical concerns, but also on policy debates and the
substantive ramifications of current events. Exposes
students to the range and complexity of both domestic
and international terrorism and also to different
approaches to the study of terrorism.

CJ 850. Workshop (1–6). Specialized instruction using
variable formats in relevant criminal justice subjects.
Repeatable for credit up to 6 hours. Restricted to graduate
students.

CJ 853. Crime Prevention through Environmental Design (3). Examines the premises and concepts of Crime Prevention through Environmental Design (CPTED), including access control, natural surveillance, territorial reinforcement, and activity support. Empha-
sizes case studies and field research.

CJ 855. Seminar on Juvenile Justice (3). An analysis of
the criminal justice process as related to the youthful offender. Emphasizes functional components, such as training of corrections personnel, community coordina-
tion for delinquency prevention and control, police-school relations, and ethical, administrative and operational aspects of juvenile justice agencies.

CJ 861. Police Administration (3). A comparative sur-
vey and analysis of administrative philosophy, problems,
procedures, organizations, and functions of effective
agency organization. Considers administrative skills relat-
ed to operations and personnel.

CJ 873. Advanced Criminal Law (3). Presents students
with a greater understanding of the complex structure of penal codes in the United States. Traditional
issues covered in a criminal law course, such as actus reus
(the act requirement), mens rea (the mental element), and
punishment philosophy are addressed. Challenges stu-
dents to integrate these elements into a workable penal
code that fits into the larger framework of the purposes
that punishment serves.

CJ 874. Seminar in Qualitative Methods (3). Practical
introduction to qualitative research methods and their
application in the social sciences. Provides an overview of
the theoretical and philosophical perspectives informing
qualitative research. Methods (design, data collection,
data analysis, and reporting) used in qualitative research
for criminal justice and criminology are examined and
applied.

CJ 882. Individual Directed Study in Criminal
Justice (3–6). Faculty-directed readings and/or research
in special areas of interest in the field of criminal justice.
Prerequisite: consent of graduate coordinator and
instructor.

CJ 891. Seminar in the Judicial Process (3). Reviews
and analyzes the functional and legal theories impacting
the administration and operation of the judicial system.
Examines actual practice as well as statutory and case law.

CJ 893. Seminar on the Application of Criminological
Theory (3). An in-depth analysis of the major theories of
criminology and of their importance to the criminal jus-
tice process. Emphasizes the student's development of a
consistent and valid frame of reference.

CJ 894. Proseminar in Criminal Justice (3). Familiar-
izes students with critical issues facing the criminal justice
system. Reviews issues which face law enforcement, the
courts, corrections, and the juvenile justice system,
considering the integrity of the entire criminal justice system.

CJ 895. Seminar in Policing (3). Familiarizes students
with such law enforcement topics as the historical
development of policing, the police role, occupational
socialization, and problems of police work.

CJ 896. Seminar in Corrections (3). Focuses on the
major issues and dilemmas facing modern corrections in
America. Includes both institutional programs such as
prisons and jails, as well as alternatives in community set-
tings, such as diversion, probation, parole, halfway
houses, work release centers, and community corrections.

CJ 897. Advanced Research Methods (3). Cross-
listed as GERO 897. Advanced research course; studies the selection and formulation of research problems, research design, hypothesis generation, scale construction, sampling procedures, and data analysis and interpretation.

project under a faculty member's direction. Project
requires a written report. Must be an individual effort, not
a group project. Primarily for graduate students who wish
to provide evidence of writing and research ability in
order to pursue further graduate education. Prerequisite:
graduate-level research methods class.

CJ 900. Thesis (1–6). Prerequisite: consent of graduate
adviser.

Ethnic Studies (ETHS) Graduate Faculty

Assistant Professor: Anna M. Chandler

Although a graduate program is not currently available in ethnic studies, the depart-
ment of ethnic studies participates extensively with other departments in the multidisciplinary
Master of Arts in communication and Master of Arts in liberal studies. See requirements for these
programs in the Elliott School of Communica-
tion and Master of Arts in liberal studies sec-
tions of the Graduate Catalog.

Courses for Graduate/Undergraduate Credit

ETHS 512. Issues in Minority Aging (3). Cross-listed
as GERO 512. Addresses the needs of students interest-
ed in (1) providing services to; (2) exploring the issues of;
(3) becoming familiar with the rights of; (4) learning the
legal procedures for resolving specific problems of; and
(5) offering practical solutions for the difficulties encoun-
tered by ethnic older persons. Prerequisites: ETHS 100,
GERO 100, SOC 111, or instructor's consent.

ETHS 540. Advanced Cross-Cultural Communica-
tion (3). Special topics in human relations. Prerequisite:
ETHS 210.

ETHS 545. Cross-Cultural Communication Theory
(3). An examination of current cross-cultural communi-
tication theory and its impact on contemporary cross-
cultural issues.

ETHS 580. Individual Projects (3). Students conduct
independent research related to a specific ethnic group.
Prerequisite: 50 hours of Wichita State credit or program
consent. Repeatable for a total of 6 hours.

ETHS 725. Concepts of Cross-Cultural Communi-
tication (3). A critical survey of the concepts of cross-
cultural communications. An in-depth examination of the
rationale used to evaluate different ethnic groups' lan-
guage and behavior. Provides a conceptual understanding
of special implications and necessary adaptations of com-
munication to, between, and among diverse ethnic groups
in our society.

Gerontology (GERO) Graduate Faculty

Professors: Raymond H. Hull, Communication
Sciences and Disorders; Samuel J. Yeager,
HWS Public Administration

Associate Professors: Linda Bakken, Counseling,
Educational, and School Psychology; Delores
Craig-Mooreland, CMA Criminal Justice;
Alicia A. Huckstadt, Nursing; Nancy
McCarthy Snyder, HWS Public
The gerontology program offers courses of study leading to the Master of Arts (MA) degree in gerontology. Because gerontology is concerned with gaining and applying knowledge about all aspects of aging in a wide range of professional settings, it is by nature, multidisciplinary. The graduate degree program in gerontology at Wichita State draws upon the faculty and resources of the Hugo Wall School of Urban and Public Affairs and faculty and courses in the colleges of liberal arts and sciences, education, and health professions.

**Master of Arts in Gerontology**

The gerontology program requires a minimum of 39 hours leading to the MA degree.

The program is designed for students with minimal previous training in gerontology, among them professionals in such areas as communicative disorders, recreation, physical or occupational therapy, allied health, business, ministry, counseling, social work, adult education, mental health, and any field where older people make up a significant and increasing proportion of the client population and where professionals with gerontological training are presently scarce.

Since employment in the area of aging often demands a knowledge of gerontology combined with knowledge and skills found in a particular discipline, students may use elective courses to pursue an emphasis in such areas as administration, health, long-term care, programs and services, research, and policy.

**Admission Requirements**

In addition to the Graduate School admission requirements, applicants must have a grade point average in their last 60 hours of their bachelor’s degree of 3.000 (on a 4.000 scale) and must submit names of three references. Students without an undergraduate statistics course are required to take a graduate-level statistics course approved by their adviser. International students must have a score higher than 575 paper-based, 230 computer-based, or 88 Internet-based on the TOEFL exam, or an overall band score of 7.0 on the IELTS.

**Degree Requirements**

Students must take certain required core courses with a minimum total of 39 hours including a terminal research project.

*Core Curriculum* ......................... 11 Hrs.

**GERO 518** Biology of Aging or
NURS 789, Chronic Illness and Aging ... 3

**Courses for Graduate/Undergraduate Credit**

**GERO 663** Economic Insecurity ............ 3

**GERO 702** Research Methods ............... 3

**GERO 715** Adult Development & Aging ...... 3

**GERO 798** Multidisciplinary Perspectives on Aging ........................................ 3

**GERO 804** Aging Programs and Policies ....... 3

**GERO 810** Advanced Gerontology

**GERO 850** Internship* .......................... 3

**GERO 880** Terminal Research Project** (one of the following)

**GERO 898** Applied Research Paper or
**GERO 899** Thesis .............................. 3

**Total** ........................................ 39

*GERO 810, Internship, may be waived for those with extensive approved practical experience.

**With the approval of their adviser, students may use their elective hours and terminal research project to pursue an emphasis.

Relevant courses in other departments or programs which students may consider include

**PADM 702, 710, 725, 745, 755, 802, 845, 865; PHS 804, 812, 818, 826, and 858.** With the consent of their graduate program adviser and program approval, students may take other courses not listed as elective hours.

Students should consult the Gerontology Program Handbook for additional guidance on the program.

**Graduate Emphasis in Gerontology**

A 12–15-hour emphasis in gerontology may be taken as part of a graduate degree program in another department. Students who wish to pursue the gerontology emphasis must fulfill the requirements in both departments.

**Courses for Graduate/Undergraduate Credit**

**GERO 501** Field Experience (3–6). A supervised field experience in an agency or organization planning or providing services to older people, individually designed to enhance each student’s skills and knowledge of the aging service network. Repeatable for 6 hours credit. Prerequisites: 12 hours of gerontology credit and instructor’s consent.

**GERO 512** Issues in Minority Aging (3). Cross-listed as ETHS 512. Addresses the needs of students interested in (1) providing services to; (2) exploring the issues of; (3) becoming familiar with the rights of; (4) learning the legal processes for resolving specific problems of; and (5) offering practical solutions for the difficulties encountered by ethnic older persons. Prerequisites: ETHS 100, GERO 100, SOC 111 or instructor’s consent.

**GERO 513** Sociology of Aging (3). Cross-listed as SOC 513. Analysis of the social dimensions of old age, including changing demographic structure and role changes and their impact on society. Prerequisite: SOC 111.

**GERO 515** Women and Aging (3). Introduces students to issues in aging that are unique to women, to women’s diverse developmental patterns, and to research methods appropriate for studying aging women and their life experiences. Topics include physical change, role transitions, and adaptation from a life span perspective.

**GERO 518** Biology of Aging (3). Cross-listed as BIOL 518. An introduction to the phenomenon of aging, including a survey of age-related processes and mechanisms of senescence, emphasizing humans. Students earning graduate credit produce a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisite: a basic course in biology that satisfies the general education requirements.

**GERO 520** Family and Aging (3). Cross-listed as SOC 520. An analysis of the families and family systems of older people. Emphasizes demographic and historical changes, widowhood, caregiving, and intergenerational relationships as these relate to the family life of older people. Prerequisites: GERO 100, SOC 111, or junior standing.

**GERO 543** Aging and Public Policy (3). Cross-listed as SOC 543. Seminar-style course explores the impact of an aging population on social institutions, covers the history of American aging policies, the organization and financing of health care for the elderly, and discusses policy analysis as an evaluative tool for comparing public approaches to responding to the needs of an increasingly diverse aging population. Considers the process of policy formation, identifies key players and interest groups and contrasts political ideologies regarding federal, state, and private responsibilities for older people. Emphasizes Social Security, the Older Americans Act, Medicare, and Medicaid policy examples. Also looks at the potential contributions of the older population to society (volunteer services, provision of family care, etc.) as affecting and affected by policy. Prerequisite: SOC 111 or GERO 100 or junior standing.

**GERO 550** Selected Topics in Gerontology (1–6). Study in a specialized area of gerontology with the focus upon preprofessional programs and current issues in the field of aging. Emphasizing knowledge and skills in applied areas of gerontology as they relate to an emerging area of research and application. Repeatable up to 6 hours. Prerequisite: instructor’s consent.

**GERO 551** Workshop (3). Specialized instruction using a variable format in relevant gerontology subjects. Repeatable for credit up to 6 hours.

**GERO 560** The Aging Network (3). An overview of federal, state, and local programs concerned with planning, managing, or direct delivery of services to the older population. Prerequisite: 9 hours of gerontology credit or instructor’s consent.

**GERO 663** Economic Insecurity (3). Cross-listed as ECON 663. Personal economic insecurity, such as unemployment, old age, health care, disability, and erratic economic fluctuations. Includes costs and benefits of governmental action to aid in meeting such insecurities. Prerequisites: ECON 202 or instructor’s consent and junior standing.

**GERO 700** Grant Proposal Preparation (3). Concerned with the process of research and project proposal development, including response to published guidelines, project planning, and proposal development and submission. Examines grant funding, including types of funding sources and their purposes and methods and...
processes of proposal evaluation. Students write and evaluate proposals.

**GERO 702. Research Methods (3).** Cross-listed as PADM 702. Acquaints students with applied public policy research methods. Emphasizes locating, collecting, appraising, and using both primary and secondary sources of data of the type used in policy, planning, and administrative research. Students must complete several short research projects.

**GERO 715. Adult Development and Aging (3).** Explores theory and research related to the development of adults and to the aging process. Using an interactive, interdisciplinary perspective, the course examines the process of change, transition, growth, and development across the adult life span. Prerequisite: GERO 708 or 6 hours of gerontology.

**GERO 720. Independent Readings in Gerontology (1–3).** Directed study in a specialized topic in gerontology. Repeatable up to 6 hours. Prerequisites: 12 hours of gerontology credit and departmental consent.

**GERO 750. Workshop in Gerontology (1–3).** Provides specialized instruction, using a variable format in a gerontologically relevant subject. Repeatable for credit.

**GERO 781. Cooperative Education (3–6).** Provides practical field experience, under academic supervision, that is suitable for graduate credit and complements and enhances the student's academic program. Repeatable up to 6 hours. These 3 to 6 hours may meet degree requirements (if approved by the academic advisor) in place of GERO 810. GERO 781 is graded Cr/NC; while GERO 810 is letter graded. Prerequisites: 12 hours of gerontology and instructor's consent.

**GERO 798. Multidisciplinary Perspectives on Aging (3).** Introduction to the advanced study of the process of aging from a multidisciplinary point of view. Not open to students with an undergraduate major or minor in gerontology. Prerequisite: admission to Graduate School.

**Courses for Graduate Students Only**

**GERO 801. Field Research in Gerontology (3).** An examination of the methods of participant observation and interview as approaches to understanding aging and the aged. Students gain practical experience in these methods through individual fieldwork projects. Prerequisite: GERO 798, 12 hours of gerontology credit, or instructor's consent.

**GERO 802. Quantitative Methods for Public Sector Professionals (3).** Cross-listed as CJ 802. Uses standard microcomputer statistical software and analysis to introduce statistics and quantitative analysis for organizational and policy decision making. Emphasizes the application of statistics and writing with quantitative evidence to real public sector policy questions. Assumes little or no background in statistics and software applications.

**GERO 803. Program Planning and Evaluation in Aging Services (3).** Examines the process of developing service programs in response to a defined community need in aging services. Includes assessment of need, identification and development of community resources; and development and evaluation of program goals, objectives, and methods of implementation. Prerequisite: 12 hours of gerontology or instructor's consent.

**GERO 804. Aging Programs and Policies (3).** Analyzes and evaluates policies and programs related to aging and old age. Emphasizes the importance of social values and historical context for understanding current policies, programs, and practices. Prerequisite: GERO 798, 12 hours of gerontology, or instructor's consent.

**GERO 810. Advanced Gerontology Internship (3–6).** Integrates academic gerontology and practical experience through supervised placement of students in an agency or organization engaging in planning, administering, or providing direct services to older people. Internship requires 200 contact hours for each 3 hours of credit. An internship paper also is required. GERO 810 is a letter-graded course. Students may substitute the Cr/NC course GERO 781, Cooperative Education, for GERO 810. Prerequisites: 12 hours of gerontology credit and instructor's consent prior to registration.

**GERO 850. Selected Topics in Gerontology (1–6).** Advanced study in a specialized area of gerontology focusing upon professional programs and current issues in the field of aging. Emphasizes knowledge and skills in applied areas of gerontology as they relate to an emerging area of research and application. Repeatable up to 6 hours. Prerequisite: instructor's consent.

**GERO 897. Advanced Research Methods (3).** Cross listed as CJ 897. Advanced research course. Studies the selection and formulation of research problems, research design, hypothesis generation, scale construction, sampling procedures, and data analysis and interpretation.

**GERO 898. Applied Research Paper (1–3).** Original research project under a faculty member's direction. Project requires a written report and defense of that report before a faculty committee. Must be an individual effort, not a group project. Intended to be a major project or capstone activity completed at the end of a student's program of study. Repeatable. Prerequisite: graduate-level research methods class.

**GERO 899. Thesis (1–3).** Repeatable, but total credit hours counted toward degree shall not exceed 4 hours.

**Criminal Justice**

See Community Affairs, School of.

**Earth, Environmental and Physical Sciences (EEPS)**

**Graduate Faculty**

*Professors:* Elizabeth C. Behrman, William D. Bischoff (dean, Fairmount College of Liberal Arts and Sciences), Hussein Hamdeh, James C. Ho, Salvatore J. Mazzullo

*Associate Professors:* Collette D. Burke, Jason Ferguson, John C. Gries, William Parcell (graduate coordinator), Syed Taher, Wan Yang (chairperson, geology)

*Assistant Professor:* Waldemar Axmann

Planet Earth consists of interacting systems—the lithosphere, biosphere, hydrosphere, and atmosphere—which form the physical foundation of life on Earth and human societies. These systems are changing rapidly due to diverse human activities. The master's program in Earth, environmental, and physical sciences (EEPS) at Wichita State University offers the opportunity for multidisciplinary and interdisciplinary graduate education and research to investigate the consequences of human actions and to seek wise development and use of the resources of our planet. The program combines the talents and expertise of faculty in the disciplines of geology, physics, and environmental science, and supporting fields such as biology and chemistry. It is designed to train a new generation of scientists, professionals, and educators who will be well equipped with general knowledge and skills in methodology, critical and creative thinking in scientific research, and advanced knowledge and skills in geology, environmental science, or physics. Graduates will meet the requirements and challenges of the 21st century to become successful science educators, professionals in industry or government, and/or aspirants to PhD studies.

The EEPS program includes three interrelated disciplines: geology, environmental science, and physics. Multidisciplinary and interdisciplinary education for a candidate in EEPS will be achieved through specially designed coursework, research, and other learning opportunities. Three required courses (EEPS 700, 701, and 721) will provide knowledge and skills in scientific methodology, research design, and scientific writing and presentation. In addition, EEPS 702 is required for all students in thesis option and nonthesis option B. Follow-up courses (e.g., EEPS 710) and discipline-specific graduate courses will enable students to master advanced knowledge and skills in the field chosen by the student; and discipline-specific or interdisciplinary research projects will foster students' ability to conduct independent research, make scientific presentations, and prepare quality scientific manuscripts.

The program is co-administered by the departments of geology and physics. It offers a variety of options for students pursuing a master's degree in EEPS—thesis, nonthesis, and internship. For example, by working on a project in a private company or government agency through internship, a student can gain first-hand experience in the professional workplace; likewise, by taking advanced courses in several fields, a student can broaden his or her scientific background to become a highly qualified science teacher.

**Admission Requirements**

Applicants for admission to the EEPS master's program should have a bachelor's degree in any field of natural sciences. However, applicants...
with a bachelor’s degree outside the field of natural sciences are also encouraged to apply for conditional admission. Motivated candidates can make up background deficiencies early in their EEPS study before gaining full-standing status in the program.

All applicants also need to meet the general admission requirements of the Graduate School, which can be found in the Admission to Graduate Study chapter of this Catalog or at the Graduate School Web site: wichita.edu/gradschool.

Degree Requirements

Upon admission, applicants need to consult with the graduate coordinator of EEPS to evaluate background deficiencies, if any, and to establish a plan of study that best suits the applicant’s goals. A master’s degree in EEPS requires satisfactory completion of coursework and/or research, which will ensure that students take advantage of the multidisciplinary/interdisciplinary nature of the program. Coursework must include at least 18 credit hours of EEPS 700–800 levels, among which at least 8 hours must be EEPS required courses (including two credit hours of EEPS 700, Technical Sessions). The required courses focus on methodologies, critical and creative thinking in scientific research, and issues common to geology, physics, environmental science, and related disciplines. To further benefit from the interdisciplinary nature of the program, students are encouraged to take courses in different disciplines and other supporting courses.

To meet the requirements of differing career goals, students may choose a thesis, internship, or non-thesis option for degree completion. The thesis and internship topic may be in geology, environmental science, or physics; such activity may be interdisciplinary, involving two or more fields.

Thesis Option: Thesis research is recommended for students who will pursue PhD study or seek professional employment after graduation. Students choosing thesis research must present a research proposal to the EEPS faculty. Before a student’s thesis proposal is approved, students critically analyze essential elements and skills of effective oral presentation of scientific research methodology, data, and results to audiences of diverse backgrounds; and learn techniques of effective use of visual display media, presentation styles, and speaker-audience interactions. Must be taken for two semesters for maximum of 2 credit hours toward the degree. Prerequisite: graduate standing or instructor’s consent.

EEPS 701. Computer Methods in Science (3) 1R; 2L. Survey of computer applications commonly used by scientists, emphasizing non-statistical applications. Includes computer-assisted instruction, data management, presentation packages, Internet resources, digital image analysis, graphics and spreadsheets, reference acquisition and management, desktop publishing, and specialized applications for modeling, simulations, mapping, and time-series analysis. Lectures and demonstrations involve individual hands-on activities and student projects. Prerequisite: graduate standing or instructor’s consent.

EEPS 702. Research Methods (3). Essential elements and principles in scientific research, such as project design, funding application, literature research, implementation, collaboration, ethics, and publication. Includes guest resource persons from the library and research offices. Prerequisite: graduate standing or instructor’s consent.

EEPS 710. Great Discoveries and Controversies in Science (3). Foundation, history, and insights that led to great discoveries in various scientific fields, and which caused great and continuing controversies in scientific theory, the advancement of science, and lessons and perspectives to be learned for future scientific research. Course involves lectures, seminars, literature research, essay writing, and presentation by students. Prerequisite: graduate standing or instructor’s consent.

EEPS 720. Scientific Writing (1). Procedure, organization, format, and style of a variety of technical and scientific publication vehicles, such as abstracts, professional journal articles, government and industrial reports, and paper and book reviews. Essential elements and skills of effective scientific written communication. Must be taken in conjunction with any course (except EEPS 889 and 890) that requires extensive writing. May be repeated two times for different courses for a maximum of 2 credits toward the degree. Prerequisite: EEPS 700.

EEPS 721. Current Issues in Global Environmental Science (3). Introduces and uses basic concepts relating to ecosystems, habitats, environments, and resources as a basis for understanding environmental problems at different spatial and temporal scales. An interdisciplinary approach frames these problems to facilitate understanding of inter-relationships required for environmental analysis, remediation and management. Prerequisite: EEPS 710 or instructor’s consent.

Courses for Graduate Students Only

EEPS 889. Internship (1–6). Students may gain interdisciplinary skills by participating in applied and/or basic research internship projects with local business, industry, or government agencies. Enrollment in internship projects requires an approved proposal. Completion of an internship for graduation requires a formal oral presentation of the internship activity and a written report. For students choosing the internship option. Repeatable for a maximum of 6 credit hours toward the degree. Enrollment is limited to 3 credit hours before a student’s internship proposal is approved. Prerequisite: consent of internship supervisor.

EEPS 890. Thesis (1–6). For students choosing the thesis option. Repeatable for a maximum of 6 credit hours toward the degree. Enrollment is limited to 3 credit hours before a student’s thesis proposal is approved. Prerequisite: EEPS 720 and consent of thesis supervisor.

English (ENGL) Graduate Faculty

Distinguished Professor: Albert Goldbarth (Adèle B. Davis Distinguished Professor of Humanities)

Professors: Tina Bennett, Jeanine M. Hathaway, William F. Woods

Associate Professors: Christopher K. Brooks, Margaret Dawe, Darren Defrain, W. Stephen Hathaway, Richard S. Spilman, Mary Waters (graduate coordinator), Donald R. Wineke (chairperson), Peter T. Zoller
Both the Master of Arts (MA) degree in English and the Master of Fine Arts (MFA) degree in creative writing are offered by the English department at Wichita State University.

Master of Arts

The Master of Arts (MA) program in English equips graduate students with the knowledge and skills necessary both to the outstanding teacher and to the well-prepared candidate for further graduate study. The graduate committee of the department accordingly requires its master’s candidates to follow a course of advanced study that leads to a comprehensive knowledge of English and American literature. Candidates are also given training in the principles of literary criticism and in the use of bibliographic tools so that they will have a general competence in criticism and research.

Admission Requirements

Applicants must meet the general requirements of the Graduate School, with the additional requirement that they have a 3.000 grade point average in their previous work in English courses. The coordinator of graduate studies in English will then evaluate the applicant’s transcript, prescribing additional undergraduate hours for those who have fewer than 24 credit hours in English and American literature or in other work acceptable to the department of English. Courses in freshman composition, grammar, teaching methods, journalism, speech, etc., may not be included in the required 24 hours. Exceptions may be made for outstanding students who have majored in related fields.

In addition to Graduate School application materials, applicants to the English MA program should submit a 500-word statement of purpose explaining their goals or reasons for pursuing an MA in English as well as their skills, accomplishments, or experiences that suggest they will be able to succeed in the program. Deadline for application: October 1 for spring, February 10 for fall admission.

Applicants who have earned degrees at institutions in countries in which English is not the native language must score at least 600 paper-based, 250 computer-based, or 100 Internet-based on the TOEFL (Test of English as a Foreign Language) Examination, or an overall band based on the TOEFL (Test of English as a Foreign Language) Examination, or an overall band of 7.5 on the IELTS before being admitted to the MA degree program in English.

Counseling. All MA candidates in English are advised by the coordinator of graduate studies in English. The coordinator and the student establish a plan of study that takes into account the student’s interests and future vocational plans.

Transfer of Credit. Students must complete 24 hours of credit at Wichita State within the English department. Students may transfer up to 9 hours of credit on the Plan A program and up to 6 hours of credit on Plan B. If the credit to be transferred comes from a program in which the student took a graduate degree, the time limits imposed by the Graduate School on other transfers of credit will not apply.

Language Requirement. Master’s degree candidates in English may fulfill the department’s foreign language requirements in any one of the following ways:

1. By submitting a transcript showing the completion with a grade of C- or better of at least 15 hours of undergraduate work in a single foreign language or the equivalent as defined by the Fairmount College of Liberal Arts and Sciences.
2. By completing the required 15 hours of undergraduate work in a single foreign language.
3. By taking a test administered by the department of modern and classical languages and literatures in the elected foreign language, with a successful score determined by the English department.
4. By submitting a transcript showing completion of 6 hours of linguistics with a grade of C- or better.

Degree Requirements

**ENGL 700, Introduction to Graduate Study in English**, normally should be included in the student’s first semester of graduate study.

All work to be counted toward the MA degree in English must be in courses numbered above 700 with the exception of 9 hours which may be taken at any level 500 or above. Candidates offering 500-, 600-, or 700-level English courses for graduate credit must satisfy a higher differential of performance relative to undergraduate students in the same courses, with the nature of this differential set by professors. There are two programs leading to the degree. Plan A, which emphasizes literature, composition, and pedagogy, is especially designed for teachers. Plan B, which requires the student to submit a master’s thesis, places more emphasis on research, scholarly writing, and the independent study of literature.

**Plan A** requires the completion of 11 courses for a total of 33 credit hours distributed as follows: ENGL 700, Introduction to Graduate Study in English; two major author(s), genre, or special topics classes (ENGL 500, 508, 512, 513, 514, 515, 516, 520, 536, 580, 712, 713, 714, 715, 816, 840, 860); two courses from British Literature before 1900 (521, 522, 524, 526, 527, 720, 721, 722, 724, 726, 727, 814); one course in American literature before WWI (503, 504, 703, 704); one course in 20th/21st century studies-British, American, or Anglophone (532, 533, 705, 728, 733); one course in composition theory and pedagogy (680, 780); and three elective classes in linguistics, literature, or methods of teaching English.

With graduate coordinator approval, courses with a minimum of 80 percent of the content meeting a requirement can occasionally be used to satisfy a requirement other than the one for which they are listed. No single course can be used to satisfy more than one requirement. A major author(s) course cannot be used to satisfy a period requirement. With approval of the graduate coordinator, a course can be repeated once for credit if at least 80 percent of the content is different. Regents’ rules require that at least seven courses be at or above the 700 level. All English department classes at the 500 level or above not taken to meet another requirement can earn credit as an elective provided that student has sufficient coursework at the 700 level or above. With graduate coordinator approval, one elective may be taken in another department or college, such as the College of Education.

A master’s thesis is not required, but students must take a comprehensive examination guided by a standard suggested reading list. A Plan A student will be examined on two literary periods, one American, one British. At least one of the two literary periods must cover literature before 1900. Students in Plan A will also be tested on a question drawn from composition and rhetoric pedagogy. Students may take either the December or May comprehensive examination by informing the graduate coordinator of intent to do so.

**Plan B** requires the completion of 10 courses for a total of 30 credit hours distributed as follows: ENGL 700, Introduction to Graduate Study in English; two major author(s), genre, or special topics classes (ENGL 500, 508, 512, 513, 514, 515, 516, 520, 536, 580, 712, 713, 714, 715, 816, 840, 860); two courses from British Literature before 1900 (521, 522, 524, 526, 527, 720, 721, 722, 724, 726, 727, 814); one course in American literature before WWI (503, 504, 703, 704); one course in 20th/21st century studies-British, American, or Anglophone (532, 533, 705, 728, 733); two elective classes in linguistics, literature, or methods of teaching English; and a master’s thesis (ENGL 890). A
maximum of 3 hours of ENGL 890 can be applied toward the degree. With graduate coordinator approval, courses with a minimum of 80 percent of the content meeting a requirement can occasionally be used to satisfy a requirement other than the one for which they are listed. No single course can be used to satisfy more than one requirement. A major author(s) course cannot be used to satisfy a period requirement. With approval of the graduate coordinator, a course can be repeated once for credit if at least 80 percent of the content is different. Regents’ rules require that at least seven courses be at or above the 700 level. All English department classes at the 500 level or above not taken to meet another requirement can earn credit as an elective provided that student has sufficient coursework at the 700 level or above. With graduate coordinator approval, one elective may be taken in another department or college.

Plan B also requires a written comprehensive thesis defense. The oral defense committee includes the director of the thesis, a graduate faculty member from the English department, and a reader from outside the English department who is a graduate faculty member. The written comprehensive examination will be guided by a standard suggested reading list. A Plan B student will be examined on three literary periods, with at least one each from American and British. At least one of the three literary periods must cover literature before 1900. Students may take either the December or May comprehensive examination by informing the graduate coordinator of intent to do so.

Master of Fine Arts in Creative Writing

The degree program for the Master of Fine Arts (MFA) in creative writing places emphasis on the development of skills and understanding in the practice of imaginative writing and upon related academic study. It is not exclusively a studio program; rather, it encourages the development of writers who are able, as the result of additional coursework in English, to demonstrate skills useful in teaching, editing, and other related areas. A core of workshops and tutorials leads to a final writing project: a collection of fiction or poetry, a novel, or some other appropriate work. Flexibility is provided in academic coursework to allow for a variety of possible interests.

All MFA students are required to take ENGL 700, Introduction to Graduate Study in English. Teaching assistants must take ENGL 667, English Syntax, and ENGL 780, Advanced Theory and Practice in Composition, unless specifically exempted.

Admission Requirements

Applicants must meet the general requirements of the Graduate School, with the additional requirement of a 3.000 grade point average in their previous coursework in English. The director of creative writing evaluates the applicant’s transcript, prescribing additional undergraduate hours for those who have fewer than 24 credit hours of acceptable coursework in English. Courses in freshman composition, grammar, teaching methods, journalism, speech, etc. may not be included in the required 24 hours. Exceptions may be made for outstanding students who have majored in related fields. With the permission of the director of creative writing, gifted writers may study in the program as special students with no specific degree intentions. Deadline for application: October 1 for spring, February 10 for fall admission.

Applicants who earned their undergraduate degrees more than ten years before their application for admission must be interviewed by the director of creative writing before they are admitted into the program.

Applicants who have earned their degrees in countries where English is not the native language must score at least 600 paper-based, 250 computer-based, or 100 Internet-based on the TOEFL (Test of English as a Foreign Language) Examination or an overall band score of 7.5 on the IELTS before they may be admitted to the program.

Degree Program Status. Applicants who seek to be admitted with full standing in the degree program must submit a sample of original writing in literary fiction (approximately 20 pages), or poetry (about six poems), to the director of creative writing at the time they seek admission.

Counseling. All MFA candidates in English are advised by the director of creative writing, who will help the student establish a plan of study taking into account the student’s interests and future vocational plans.

Transfer of Credit. A minimum of 24 of the total 48 credit hours required for the degree must be taken at Wichita State. No more than 24 hours of credit may be counted toward the degree from other graduate work taken at Wichita State or at another school. If the credit to be transferred comes from a program in which the student took a graduate degree, the time limits imposed by the Graduate School on transfer of credit will not apply.

Degree Requirements

Coursework. The 48 credit hours of coursework are apportioned into two categories: required and elective courses.

A. Required Courses

1. A minimum of 3 hours per semester in ENGL 801, Creative Writing: Fiction, or 805, Creative Writing: Poetry, to a maximum of 12 credit hours;

2. Three hours in ENGL 700, Introduction to Graduate Study in English, or the equivalent, required of all graduate students. ENGL 700 normally should be included in the student’s first semester of graduate study;

3. Three hours in ENGL 714, Graduate Studies in Drama; 712, Graduate Studies in Fiction; or 713, Graduate Studies in Poetry. With departmental consent, each course may be repeated for a maximum of 6 hours credit;

4. Three hours in ENGL 733, Seminar in Contemporary Literature; 860, Graduate Seminar in Special Topics; or another suitable seminar in literature. With departmental consent, seminars may be repeated for a maximum of 12 hours credit;

5. Two to 6 hours in ENGL 875, MFA Final Writing Project;

6. For purposes of enrichment, candidates must take at least 3 graduate hours in the humanities, fine arts, or other discipline outside English. The choice is contingent upon the student’s having the proper prerequisites; and

7. Graduate teaching assistants are required to take ENGL 780, Advanced Theory and Practice in Composition, unless specifically exempted.

B. Elective Courses

Elective courses may be taken to pursue historical, technical, or theoretical studies that the candidate finds useful, to strengthen areas of weakness, or simply to enrich their degree program appropriately. All candidates must successfully complete a minimum of 15 elective hours in English courses numbered 800 and above, with the exception of English courses numbered 515 through 527, which may be taken for graduate credit. Candidates may take up to 26 elective hours in English courses numbered 800 and above and in the approved 500-level courses. Other exceptions may be made as approved by the director of creative writing and with the consent of the department chairperson. Graduate students in 500-, 600-, and 700-level courses are expected to meet higher standards of achievement than those imposed on undergraduates in the same courses. Within this unit, as many as 9 hours total of ENGL 880, Writer’s Tutorial: Fiction; ENGL 881, Writer’s Tutorial: Poetry;
and ENGL 850, Directed Reading, may be taken.

Comprehensive Examination. All candidates are required to pass a written comprehensive examination in the final semester of their coursework. This examination is based on a reading list of 30 books chosen from the creative writing program master list by the candidate's final writing project director and the director of creative writing in consultation with the candidate.

Final Writing Project. The MFA final writing project in creative writing consists of a body of original work of publishable quality. The manuscript must be of such length as is appropriate to published books in its genre and is to be written under the direction of a member of the program staff. Candidates may preface their final writing project with a short introduction if they choose to do so.

Final Writing Project Review. Once the candidate has submitted the final writing project, a committee, composed of project director, second reader, and a regular graduate faculty member from English, will examine the work and determine whether or not the project meets the standards of acceptance.

Composition
Courses for Graduate/Undergraduate Credit
ENGL 581. Composition Practicum (1). Required for all teaching assistants in English. Does not count for credit toward the MA or MFA degree. Focuses on techniques and strategies for teaching composition. Each participant enrolls in the syllabus group appropriate to the composition course he or she teaches. Graded S/U only. Repeatable for credit. Prerequisite: appointment as a graduate teaching assistant in the department of English.

ENGL 680. Theory and Practice in Composition (3). Introduces theories of rhetoric, research in composition and writing programs, and practices in schools and colleges. Students investigate the process of writing, analyze varieties and samples of school writing, and develop their own writing skills by writing, revising, and evaluating their own and others' work. Designed especially for prospective and practicing teachers, and may not be taken for credit by students with credit in ENGL 780.

ENGL 681. Editing American English (3). Students master the rules and conventions of grammar, sentence structure, spelling, punctuation, usage, and mechanics, and learn how to apply them while they are revising and editing a written text. Students work as tutors in the writing center to learn and understand the practical application of editing rules. Includes instruction in the conventions of editing Standard English (also known as Edited American English) and in methods of effective tutoring. Prerequisites: ENGL 101 and 102.

ENGL 685. Advanced Composition (3). Explores the relationships among contemporary issues, problem solving, and communication. First objective: engage students in interdisciplinary inquiry into some aspect of social policy, inquiry which asks students to apply the analytical approaches of their major fields to current issues of broad, general interest. Second objective: develop students' abilities to communicate their knowledge and assumptions about this issue to a variety of audiences and for a variety of purposes. Prerequisites: ENGL 101 and 102 and upper-division standing.

ENGL 780. Advanced Theory and Practice in Composition (3). For teaching assistants in English. Review of new theories of rhetoric, recent research in composition, and new promising developments in composition programs in schools and colleges. Students are given practice in advanced writing problems, situations, and techniques and may propose projects for further special study.

Creative Writing
Courses for Graduate/Undergraduate Credit
ENGL 517–518. Playwriting I and II (3-3). Cross-listed as THEA 516 and 517. The writing of scripts for performance. Emphasizes both verbal and visual aspects of playwriting. If possible, the scripts are performed. Not repeatable for credit. Prerequisite: instructor's consent.

ENGL 585. Writer's Tutorial: Prose Fiction (3). Tutorial work in creative writing in literary fiction with visiting writer. Repeatable for credit. Prerequisite: consent of creative writing director.

ENGL 586. Writer's Tutorial: Poetry (3). Tutorial work in creative writing in literary poetry with visiting writer. Repeatable for credit. Prerequisite: consent of creative writing director.

ENGL 770. Professionalism (1). Seminar and workshops cover topics such as applying for advanced study, the academic job market, preparation of job application materials, where and how to present or publish research or creative writing, and similar issues. Graded S/U.

Courses for Graduate Students Only
ENGL 801. Creative Writing: Fiction (3). Advanced work in creative writing: literary fiction. Repeatable for credit. Prerequisite: consent of creative writing director.

ENGL 803. Creative Writing: Nonfiction (3). Advanced work in creative nonfiction: forms of nonfiction requiring a distinctive voice and demanding a formal artistry generally associated with fiction. Prerequisite: consent of creative writing director.

ENGL 805. Creative Writing: Poetry (3). Advanced work in creative writing: poetry. Repeatable for credit. Prerequisite: consent of creative writing director.

ENGL 875. MFA Final Writing Project (1–6). Prerequisites: ENGL 580 or departmental consent.

ENGL 880. Writer's Tutorial: Fiction (3). Tutorial work in creative writing in literary fiction with visiting writer. S/U grade only. Prerequisite: consent of creative writing director.


Linguistics
Courses for Graduate/Undergraduate Credit
ENGL 667. English Syntax (3). Cross-listed as LING 667. Studies the basic principles of English syntax, covering the major facts of English sentence construction and relating them to linguistic theory. Prerequisite: ENGL 315 or equivalent or departmental consent.

ENGL 672. Studies in Language Variety (3). Cross-listed as LING 672. Introduces the study of language variety with special attention to regional and social dialect in America and methods of studying it. May be repeated for credit when content varies. Prerequisite: ENGL 315 or departmental consent.

Literature
Courses for Graduate/Undergraduate Credit
ENGL 500. Introduction to Critical Theory (3). Introduces students to critical literary theory. Topics may include readings in gender theory, historicism, psychoanalytical theory, cultural criticism, Marxism, reader-response theory, and deconstruction. May also offer a survey of classical and early-modern critical methodologies from Plato to the formalists of the early 20th century. Prerequisites: English 102 and/or instructor's consent.

ENGL 503. American Literature I (3). The major fiction, poetry, and nonfiction prose of the classic American period. Discussions may include the historical evolution of American letters, the development of the novel and romance, the transcendental period, and the rise of Western and regional literatures. Prerequisites: junior standing and one college literature course.

ENGL 504. American Literature II (3). Fiction, poetry, and drama from the late 19th century to after World War II. Readings also may include literary criticism and other types of nonfiction prose. Discussions cover themes, topics, and literary forms inspired by the social and cultural movements and events of the first half of the 20th century. Prerequisites: junior standing and one college literature course.

ENGL 508. Critical Studies in Film (3). Subjects announced each semester. Intensive analysis of a particular film genre, period, director, or theme, giving special attention to the historical, cultural, theoretical, and technical contexts in which the films were made. Repeatable once for credit with a change of content. Prerequisites: ENGL 102, and one college-level literature or film course.

ENGL 512. Studies in Fiction (3). Subjects announced each semester. Repeatable once for credit. Prerequisites: junior standing and one college literature course.

ENGL 513. Studies in Poetry (3). Subjects announced each semester. Repeatable once for credit. Prerequisites: junior standing and one college literature course.

ENGL 514. Studies in Drama (3). Subjects announced each semester. Repeatable once for credit. Prerequisites: junior standing and one college literature course.

ENGL 515. Studies in Shakespeare (3). Subjects announced each semester. Repeatable for credit, except by students who take ENGL 340. Prerequisites: junior
standing and one college literature course, or instructor's consent.

ENGL 516. Studies in a Major Author (3). Designed to allow in-depth study of the works of a major American or British author, emphasizing the development of that author's art and considering the work from a variety of critical perspectives.

ENGL 520. Epic and Romance (3). Readings in classic and early Western narratives, beginning with Homer's Bronze-Age epic and ending with late medieval romance. Examines the literary conventions and cultural assumptions that typify these works. Pays particular attention to the historical shift in interest from epic to romance as a reflection of broad changes, not only in literary form and content, but also in social customs and worldview. Prerequisites: junior standing and one college literature course.

ENGL 521. Medieval Literature (3). Works by writers of the eighth to 15th centuries, often thematically or historically focused. Readings may include lyric poetry, epic, romance, saga, and drama. Prerequisites: junior standing and one college literature course, or instructor's consent.

ENGL 522. Renaissance Literature (3). Works by writers of the 16th through the mid-17th centuries, often thematically or historically focused. Readings may include poetry, drama, fiction, and nonfiction prose. Prerequisites: junior standing and one college literature course, or instructor's consent.

ENGL 524. Restoration and 18th Century Literature (3). Works by writers of the late 17th through the 18th centuries, often thematically or historically focused. Readings may include poetry, fiction, drama, and nonfiction prose. Prerequisites: junior standing and one college literature course, or instructor's consent.

ENGL 526. Romantic Literature (3). Works by writers of the late 18th and/or early 19th centuries, often thematically or historically focused. Readings may include fiction, poetry, drama, and/or literary criticism or other nonfiction prose. Prerequisites: junior standing and one college literature course, or instructor's consent.

ENGL 527. Victorian Literature (3). Works by writers of the mid to late 19th century, often thematically or historically focused. Readings may include fiction, poetry, drama, and/or literary criticism or other nonfiction prose. Prerequisites: junior standing and one college literature course, or instructor's consent.

ENGL 532. Modern British Literature (3). Irish and English literature of the 20th century. Subjects announced each semester. Repeatable once for credit with change of topic. Prerequisites: junior standing and one college literature course.

ENGL 533. Contemporary Literature (3). Modern literature, primarily British and American, since 1950. Subjects announced each semester. Repeatable once for credit with change of topic. Prerequisites: junior standing and one college literature course.

ENGL 536. Writing by Women (3). Cross-listed as WOMB 536. Explores various themes in critical approaches to literature composed by women writers, especially those whose works have been underrepresented in the literary canon. Genres and time periods covered, critical theories explored, and specific authors studied vary in different semesters.

ENGL 540. Introduction to Critical Theory (3). Introduces students to critical literary theory. Topics may include readings in gender theory, historicism, psychoanalytical theory, cultural criticism, Marxism, reader-response theory, and deconstruction. May also offer a survey of classical and early-modern critical methodologies from Plato to the formalist schools of the early 20th century. Prerequisites: English 102 and/or instructor's consent.

ENGL 550. Independent Reading (1–3). For majors and non-majors who wish to pursue special reading or research projects in areas not normally covered in coursework. Repeatable once for credit. Prerequisites: English 102 and departmental consent.

ENGL 580. Special Studies (1–3). Topic selected and announced by the individual instructor. Repeatable once for credit. Prerequisites: departmental consent.

ENGL 590. Senior Seminar (3). In-depth study of a specialized literary topic. Emphasis is on focused readings, interactive debate, individual research and the presentation of research reports and essays. Topics vary according to the specialization of the instructor. This is a required capstone course for the English major, and should be taken during a student's final year of study. Prerequisite: completion of 18 hours toward the major. Not available for graduate credit.

ENGL 700. Introduction to Graduate Study in English (3). Prepares students to perform effectively in graduate classes in English. Covers: (1) basic bibliographical tools, (2) terminology both technical and historical; (3) various approaches to the study of literature, such as intrinsic analysis of a literary work, the relationships of biography to literary study, and the relevance of other disciplines, such as psychology, to literature; and (4) the writing of interpretative and research essays. Maintains a balance between criticism and research throughout the semester.

ENGL 703. Seminar in American Literature I (3). Advanced study of major issues and themes in fiction, poetry, and nonfiction prose from the early American period to the Civil War, with attention to the social and cultural contexts that shaped the literary history of the colonial period and the early nation. Repeatable once for credit with a change of content and departmental consent.

ENGL 704. Seminar in American Literature II (3). Advanced study of major issues and themes in fiction, poetry, and nonfiction prose from the postbellum period to 1920, with attention to the social and cultural contexts that shaped such trends as realism and modernism. Repeatable once for credit with a change of content and departmental consent.

ENGL 705. Seminar in American Literature III (3). From 1920 to 1970. Advanced study of major issues and themes in fiction, poetry, and nonfiction prose from 1920 to the contemporary period, with attention to the social and cultural contexts that shaped such trends as modernism and postmodernism. Repeatable once for credit with a change of content and departmental consent.

ENGL 712. Graduate Studies in Fiction (3). Selected topics in the development of the form and content of prose fiction.

ENGL 713. Graduate Studies in Poetry (3). Selected topics in forms, techniques, and history of poetry.

ENGL 714. Graduate Studies in Drama (3). Selected topics in the history and nature of dramatic literature.

ENGL 715. Seminar in Chaucer (3). Advanced study of Chaucer's major works. Readings are in Middle English, and include selections from the Canterbury Tales, Troilus and Criseyde, the dream visions, the lyrics, and a limited number of comparative readings in other late 14th and early 15th century authors such as Langland, the Gawain-Poet, and Gower. Emphasis is placed on close reading and interpretation of the text, and on the historical context of Chaucer's work, which involves study of subjects such as the black plague, the peasants' revolt, guilds, fairs, chivalry, trade, and healing. Repeatable once for credit with a change of content and departmental consent.

ENGL 720. Seminar in Old English (3). Cross-listed as LING 720. Advanced course in Old English language and literature. Studies the Old English language in enough detail to enable the reading of some prose and poetry, including parts of Beowulf and the elegiac poems in the original. Some literature, including all of Beowulf, is read in translation. Particular attention is given to close reading and interpretation of the text, and to important literary and cultural contexts of the period and its Norse heritage. Repeatable once for credit with a change of content and departmental consent.

ENGL 721. Seminar in Medieval Literature (3). Advanced study of selected works from old and middle English literature and continental literature of the medieval period, with an emphasis on close reading as well as the social and cultural context of the readings. Content varies at the discretion of the instructor. Readings may include epic, romance, drama, lyric, and satire, as well as examples of discourse—oration, history, memoir, political writings, philosophy—and major works and authors such as Beowulf, Cynewulf, Wulfstan, Chrétien de Troyes, Marie de France, Chaucer, the Gawain-Poet, and Malory. Repeatable once for credit with a change of content and departmental consent.

ENGL 722. Seminar in Renaissance Literature (3). Advanced study of works by important writers of the 16th and earlier 17th centuries. Content varies at the discretion of the instructor. Offerings may be thematically or historically focused, and may include poetry, drama, fiction, or nonfiction prose. Repeatable once for credit with a change of content and departmental consent.

ENGL 724. Seminar in Restoration and 18th Century British Literature (3). Advanced study of major selected works and authors of the period between 1660 and 1789, covering the crucial genres of drama, poetry, the essay, and the novel. Content varies at the discretion of the instructor. Study may include satire, political discourse, comedy, tragedy, parody, and/or innovative forms such as the novel and fictionalized biography. Canonical figures such as Congreve, Dryden, Pope, Swift, Fielding, and Johnson may figure prominently. Historical contexts are emphasized. Repeatable once for credit with a change of content and departmental consent.
ENGL 726. Seminar in Romantic Literature (3). Advanced study of the authors, genres, themes, and/or movements in late 18th and early 19th century literature, with content varying at the discretion of the instructor. Possible topics might include Romantic-era women writers, the historical contexts of the French Revolution and British imperialism, the rise of the novel, the canonical Romantic poets (Blake, Wordsworth, Coleridge, Shelley, Byron, and Keats), the development of mass print culture, and/or representations of sublime landscapes, solitary meditation, and European travel. Repeatable once for credit with a change of content and departmental consent.

ENGL 728. Seminar in Modern British Literature (3). Advanced study of the authors, genres, themes, and/or movements in British literature (1900 to 1980). Possible topics may include the British novelists (Conrad, Lawrence, Woolf, Forster, Joyce, Waugh, Greene, Amis, Durrell, Burgess, etc.); the British poets (Housman, Yeats, Lawrence, Eliot, Auden, Thomas, Hughes, etc.); the playwrights (Shaw, Becket, Eliot, Coward, Maugham, etc.). The seminar may also focus on additional poets, novelists, and dramatists, such as modernism, postmodernism, etc. Repeatable once for credit with change of content and departmental consent.

ENGL 730. Seminar in Victorian Literature (3). Advanced study of the authors, genres, themes, and/or movements in Victorian literature (1832–1900). Possible topics might include the Victorian novelists (William Thackeray, Charles Dickens, George Eliot, Anthony Trollope, Thomas Hardy, Rudyard Kipling, etc.); the Victorian poets (Tennyson, Browning, Arnold, Arthur Hugh Clough, Dante, Gabriel Rossetti, Christina Rossetti, George Meredith, Algernon Charles Swinburne, etc.); the Victorian prose writers (Carlyle, Mill, Newman, Ruskin, Arnold, Pater, etc.). The seminar may also focus on themes within Victorian literature, such as the Young England movement, the Higher Criticism and its effects, the Woman Question, industrialization and labor, or the Victorian Empire. Repeatable once for credit with a change of content and departmental consent.

ENGL 733. Seminar in Contemporary Literature (3). Covers selected topics in the literature of the last quarter-century, including literature in translation. Deals with a broad range of authors and genres. Repeatable for credit with change of content and departmental consent.

Courses for Graduate Students Only

ENGL 808. Graduate Studies in Film (3). Examines film as a literary form while acknowledging its unique status as a visual medium. Subjects the film medium to the standard tools of literary criticism and critical theory to fully comprehend exactly how film functions as a narrative form. Students are directed to develop a vocabulary of film terminology and to understand how film functions as a story-telling medium. Emphasis is placed on interpretive strategies. Prerequisite: graduate standing.

ENGL 814. Graduate Studies in British and World Literature Before 1900 (3). Examines the major genres and authors of literature before 1900. Typical subject matter may include the rise of the novel, the changing role of poetry, and the evolution of drama, or similar topics. Repeatable once for credit with a change of content. Prerequisite: graduate standing.

ENGL 816. Graduate Studies in Major Author(s) (3). Careful study of the works of a major author with readings in secondary sources. Assignments may include reports, discussions, and papers. Occasionally an appropriate pairing of major authors may be offered. Repeatable for credit with change of content.

ENGL 840. Graduate Studies in Criticism (3). Select topics in the theory and practice of literary criticism.

ENGL 850. Directed Reading (2–3). For graduate students who want to pursue special research in areas not normally covered in coursework. A directed reading prospectus must be approved by the directing faculty and the graduate coordinator before registering. Repeatable for credit with departmental consent. Replaces ENGL 855. Prerequisite: departmental consent.

ENGL 860. Graduate Seminar in Special Topics (1–3). Intensive study of selected texts, writers, or literary problems. Seminar discussions, reports, and research projects. Repeatable for credit with departmental consent.

ENGL 890. Master's Thesis (3). May be repeated, but a maximum of three units of ENGL 890 can be applied toward the degree requirements. A thesis prospectus must be approved by the thesis advisor and the graduate coordinator before the student may register for 890.

Ethnic Studies

See Community Affairs, School of.

Geography (GEOG)

Although there is no graduate program in geography, the following courses are available for graduate credit.

Courses for Graduate/Undergraduate Credit

GEOG 510. World Geography (3). A study of world regions including an analysis of each region's physical, political, economic, historical, and cultural geography. May not be taken if credit has been received for GEOG 210. Prerequisite: instructor's consent.

GEOG 530. Geography of Latin America (3). Physical, political, economic, historical and human geography of Latin America.

GEOG 542. Geography of Europe (3). Physical, political, economic, historical, and human geography of Europe.

GEOG 695. Special Studies in Geography (1–3). 3R or 2R; 3L. Lab fee (lab is included when appropriate) Systematic study in a selected area of topical interest in geography. Course given on demand; repeatable for credit when content differs. May require field trips. Prerequisite: junior standing.

Geology (GEOL)

Graduate Faculty

Professors: William D. Bischoff (dean, Fairmount College of Liberal Arts and Sciences), Salvatore J. Mazzullo

Associate Professors: Collete D. Burke, John C. Gries, William Parcell (graduate coordinator, EEPS), Wan Yang (chairperson)

Students interested in graduate studies in geology should see the separate section in this Catalog for Earth, environmental, and physical sciences (EEPS) Master of Science program for details. This program offers advanced training in research, knowledge, and skills in geology, environmental science, or physics. For students concentrating their efforts in geology, the following courses are available for graduate credit in this degree program.

Courses for Graduate/Undergraduate Credit

GEOL 526. Sedimentary Geology (3). 2R; 3L. Origin, classification, primary structures, and physiochemical processes controlling deposition of sedimentary rocks. Reviews diagnosis of carbonate rocks and evaporites. Includes a survey of modern and ancient depositional environments and petrographic study of sedimentary rocks in thin sections. May require field trips. Prerequisite: GEOL 102 (with lab) or 111.

GEOL 540. Field Mapping Methods (2). 6L. Field mapping methods with special reference to use of level, compass, barometer, altimeter, and airphotos. Field trips required. Prerequisite: GEOL 102 (with lab) or 111 or GEOL /GEOG 201.

GEOL 544. Structural Geology (3). 2R; 3L. Stress-strain theory and mechanics of rock deformation, description, and genesis of secondary structural features in crustal rocks resulting from diastrophism, elements of global tectonics, and laboratory solution of geologic problems in three dimensions and time. May require field trips and field problems. Prerequisites: MATH 112 or 123; GEOL 312; and GEOL 324 or 526.

GEOL 552. Physical Stratigraphy (3). 2R; 3L. Description, classification, methods of correlation, and determination of relative ages of stratigraphic rock units; stratigraphic principles and practice; importance and use of biostratigraphy; the nature of cyclic sedimentation and controls on deposition; elements of sequence stratigraphy; measurement and correlation of stratigraphic sections in outcrops. Requires field trips. Prerequisites: GEOL 312 and 526.

GEOL 560. Geomorphology and Land Use (2). Identification of landforms and their genetic processes producing landforms; the influence of geomorphology in aspects of natural hazards such as landslides, floods, earthquakes, and volcanic activity; soil erosion, drainage basin modification, coastal and desert environments, mineral resource exploitation, and their effects on humans; importance of these influences in environmental management and land-use planning. Prerequisite: GEOL 111 or GEOL 102 or GEOL /GEOG 201.

GEOL 564. Remote Sensing Interpretation (3). 2R; 3L. Introduces interpretation techniques for most types of images acquired by remotely positioned means. Physical principles that control various remote sensing processes using the electromagnetic spectra are applied to geology, land use planning, geography, resource evaluation, and
environmental problems. Derivative maps generated from a variety of images. May require field trips. Prerequisite: GEOL 102 or 111 or GEOL/GEOG 201.

GEOL 570. Biogeology (3). 2R; 3L. Systematic survey of major fossil biogeochemical materials, analysis of the origin and evolution of life, and paleoecological interpretation of ancient environments and climates. Includes handling and binocular microscopic examination of major fossil biogeochemical materials. Includes application of analyzed fossil data to the solution of problems in biogeochemistry, paleoecology, paleoecology, and paleography. Cites examples from fields of invertebrate, vertebrate and microspaleontology, and stratigraphy. May require museum and field trips. Prerequisite: GEOL 312.

GEOL 574. Special Studies in Paleontology (3). 2R; 3L. A systematic study in selected areas of biogeography and palaeontology. Content differs, upon demand, to provide in-depth analysis in the fields of: (a) invertebrate paleontology, (b) vertebrate paleontology, (c) micropaleontology, (d) palynology, and (e) paleoecology. Gives appropriate laboratory instruction in the systematics, taxonomy, and biogeological relationships within the selected fields listed. May require field trips. Repeatable for credit to cover all five areas listed.

GEOL 621. Geochemical Cycling (3). Capstone course. The geochemistry of earth materials and the important geochemical processes; cycles operating on and within the atmosphere, hydrosphere, and lithosphere through time; anthropogenic effects on these cycles today. Prerequisites: GEOL 102 (with lab) or GEOL 111 and CHEM 211; or instructor's consent.

GEOL 630. Field Studies in Geology (2–6). (a) Geology of Kansas (1–3); (b) Geology and Natural History of Tropical Marine Environments (3). Off-campus, systematic field study in a selected area of geological significance. Course given upon demand; repeatable for credit when locality and/or content differ. Where appropriate, travel, lodging, and board costs are charged. Prerequisite: instructor's consent.

GEOL 640. Field Geology (6). Capstone course. Field investigation of sedimentary, igneous, and metamorphic rock units and their structures. Includes the application of mapping methods in solving geologic problems. Held at an off-campus field camp for five weeks (including weekends). Preparation of geologic columns, sections, maps, and an accompanying report are due on campus during the sixth week. Prerequisite: GEOL 324, 540, 544, and 552.

GEOL 650. Geohydrology (3). 2R; 3L. Capstone course. The hydrologic cycle, physical, and chemical properties of water; fluid flow through permeable media; exploration for and evaluation of groundwater; water quality and pollution; and water law. Prerequisites: GEOL 552, MATH 242 and 243; or instructor's consent.

GEOL 657. Earth Science Instructional Methods (3). Practice in teaching an introductory course in the earth sciences. Developing and presenting the latest scientific laboratory techniques and evaluating their effectiveness. May be taken more than once if content and objectives differ. Prerequisite: senior standing and department chairperson's permission.

GEOL 678. Geologic Perspectives on Climatic Change (3). Capstone course. Modern climate and climatic changes and analysis of climatic deterioration; systematic study of geologic evidence of climate change through time. Emphasizes theoretical causes, feedback mechanisms, and recognition of effects on climatic perturbations in the rock record. Prerequisites: GEOL 312 and 526.

GEOL 680. Geologic Resources and the Environment (5). 2R; 3L. Occurrence and origin of metallic and nonmetallic economic mineral deposits; laboratory examination of ores and industrial minerals. Occurrence and supply, regeneration, and future demand for water and soil resources; and fossil and nuclear fuels. Studies environmental aspects of resource exploitation and use, generation and disposal of waste, environmental hazards, and reclamation. May require field trips. Prerequisite: GEOL 324.

GEOL 682. Petroleum Geology (3). 2R; 3L. The origin, migration, and accumulation of oil and gas in the earth's crust; reservoir trap types in common hydrocarbon fields, origin and types of porosity systems, and distribution of world petroleum supplies. Introduces subsurface study techniques. May require field trips. Prerequisites: GEOL 526 and 552.

GEOL 684. Methods of Subsurface Analysis (2). 1R; 3L. Methods of remotely logging and describing the geologic occurrence of subsurface strata; characterization of subsurface strata, including laboratory analysis of recovered subsurface samples, application to petroleum geology, mineral resource evaluation, and environmental geology. Prerequisites: GEOL 312, 526, and 552; or instructor's consent.

GEOL 690. Special Studies in Geology (1–5). Systematic study in selected areas of geology. Offered on demand; repeatable for credit when content differs. Requires laboratory work or field trips (instructor's option). Prerequisite: instructor's consent.

GEOL 698. Independent Study in Geology (1–3). Independent study on special problems in selected areas of geology: (a) general, (b) mineralogy, (c) petrology, (d) structural, (e) palaeontology, (f) economic geology, (g) sedimentation, (i) stratigraphy, (j) geophysics, and (k) petroleum. Requires a written final report. Prerequisite: consent of sponsoring faculty.

GEOL 702. Environmental Science I (5). 3R; 4L. Advanced theoretical and applied principles of the interdisciplinary study of environmental science. Includes chemical cycling, atmospheric chemistry, aquatic chemistry, and phase interactions. The laboratory portion addresses local environmental problems from a risk assessment perspective. GEOL 702 and 703 (or equivalent) are required for all graduate students in the EEPS master's program. Prerequisite: acceptance in the EEPS master's program or instructor's consent.

GEOL 703. Environmental Science II (5). 3R; 4L. Advanced theoretical and applied principles of the interdisciplinary study of environmental science. Includes environmental chemical analysis, environmental toxicology, aquatic microbial biochemistry, environmental biochemistry, water treatment, photochemical smog, and hazardous waste chemistry. The laboratory portion addresses local environmental problems from a risk assessment perspective. GEOL 702 and 703 (or equivalent) are required for all graduate students in the EEPS master's program. Prerequisite: GEOL 702 or instructor's consent.

GEOL 704. Environmental Science Colloquium (1). Cross-listed as CHEM 704. Students in the EEPS master's program are required to enroll two semesters during their program of study. Includes presentations by guest speakers and required readings for class discussion. May also include student involvement in environmentally related community groups and projects. Graded S/U only. May be repeated for up to four hours credit.

GEOL 706. Environmental Science Internship (3–6). Cross-listed as CHEM 706. Students in the EEPS master's program may gain interdisciplinary skills in environmental science by participating in applied and/or basic research internship projects with local business, industry, or government agencies. Internship option is an alternative to thesis research for degree requirements. Enrollment in internship projects requires an approved proposal. Completion of an internship for graduation requires a formal oral presentation of the internship activity and a written report. Prerequisites: Environmental Science I and II.

GEOL 720. Geochemistry (3). The chemistry of natural aqueous solutions and their interaction with minerals and rocks; thermodynamics and kinetics of reactions; emphasizes application to sedimentary environments and environmental problems. Requires some laboratory work. Prerequisites: GEOL 324 and CHEM 212 or instructor's consent.

GEOL 724. Soils (3). Geologic analysis of soil types, their formation, occurrence, and mineralogy; soil management and conservation; environmental aspects of soil occurrence including stability studies, pollution, and reclamation.

GEOL 726. Carbonate Sedimentology (3). 2R; 3L. The origin and genetic description of carbonate particles, sediments and rocks, mineralogy and textural classifications; depositional environments in carbonate rocks and analysis of modern and ancient depositional system. May require field trips. Prerequisites: GEOL 526, 552, or equivalents.

GEOL 727. Carbonate Diagenesis (3). 2R; 3L. Analyzes diagene of carbonate sediments and rocks. Includes mineralogical stability in natural waters, meteoric and deep-burial diagenesis, dolomitization processes and products; trace elements and isotopes of diagenetic tools, cathodoluminescence and X-ray diffraction studies of carbonates; origin and porosity. Prerequisite: GEOL 726 or instructor's consent.

GEOL 730. Perspectives: Geoscience and the Environment (3). A perspective of global issues of geoenvironmental concern with regard to past, present, and future exploitation, use, and availability of earth’s resources; marine and terrestrial pollution and resource use; water, minerals, and fuel resources; population growth and resource availability; the greenhouse effect, global climatic change, and sea level rise and their effects on populations; future trends in environmental management and remediation of environmental problems of geologic scope. Prerequisite: GEOL 312, 680; or instructor's consent.

GEOL 740. Basin Analysis (3). A practical course in analysis of petroleum-bearing or other sedimentary
basins; emphasizes detailed subsurface mapping to document depositional, tectonic, and burial history of sedimentary basins; subsurface lithologic and geochemical sample analysis and evolution of sedimentary facies systems and hydrocarbons maturation history. Includes compilation of existing data to determine geologic evolution of basins. Prerequisites: GEOL 682, 684, or instructor's consent.

GEOL 745. Advanced Stratigraphy (3). Analysis of stratigraphic sequences at the local to global scales in terms of sequence stratigraphic concepts and high-resolution interpretation of depositional sequences (from outcrop and subsurface data); seismic sequence stratigraphy, and significance of unconformities in sequence identification and development; local to global correlation of sequences and sea level history through time; eustatic sequences of North America. Required seven-day field trip. Prerequisites: GEOL 512, 526, and 726.

GEOL 750. Workshop in Geology (1–3). Short-term courses with special focus on geological problems. Prerequisites: graduate standing and/or instructor's consent.

GEOL 751. Advanced Geohydrology (3). Integrations of practical and theoretical coverage of subsurface fluid flow as applied to shallow aquifers. Covers the mass transport in both the saturated and vadose zones as well as the occurrence and movement of non-aqueous fluids. Covers groundwater quality, sources of groundwater contamination, retardation of contaminants, retardation and attenuation of dissolved solids and the response of inorganic and organic substances to subsurface aqueous and non-aqueous phases. Computer simulation models used whenever practical along with detailed analysis of case histories, including those related to environmental geoscience. Prerequisites: GEOL 650, 681, MATH 344, or instructor's consent.

GEOL 752. Climatic Evolution of the Earth (3). Basics of climatology and paleoclimatology, and recognition of paleoclimatic indicators in the rock record. Climatic changes at different scales in Earth history and possible causes, and nature of climatic records. Roles of climate change on the evolution of Earth's biosphere, hydrosphere, atmosphere, and lithosphere. Field trip(s) may be required. Prerequisite: GEOL 721, graduate standing, or instructor's consent.

GEOL 760. Exploration Geophysics (3). Introduces the theory and application of geophysical techniques for hydrocarbon, mineral, and groundwater prospecting. Includes use of seismic techniques, instrumentation for acquisition on land and sea, seismic processing, structural and stratigraphic modeling, 3-D seismic exploration, and seismic refraction techniques. Prerequisites: completion of geology undergraduate math and physics requirements; MATH 344 or 555; GEOL 324 and 544; and instructor's consent.

GEOL 781. Advanced Numerical Geology (3). Involves practical implementation of algorithms and computer code. Includes the analysis of multivariate techniques and the development of the computer/algorithm skills needed to handle very large databases. Covers standard statistical approaches to data analysis; treatment of applied linear algebra and matrix theory; and the application of linear and non-linear discriminate analysis, various factor analytic techniques, hard and fuzzy clustering, linear and non-linear un-mixing analysis, and other forms of data modeling. Prerequisites: GEOL 681 or equivalent, competence in one or more high level computer languages, MATH 344 or 555, and instructor's consent.

GEOL 795. Earth and Space Physics (3). Cross-listed as PHYS 795. An introduction to the geosciences and astrophysics of the solar system. Topics include the surface, interior and atmospheres of the planets with a comparative planetology approach, and the sun-planet system including solar physics and the effect of the sun on the earth's environment and geology. Prerequisites: PHYS 313–314, and MATH 242, or EEPS 721, or instructor's consent.

Courses for Graduate Students Only

GEOL 800. Research in Geology (3). 9L. Research in special areas of geology: (a) general, (b) mineralogy, (c) petrology, (d) structural, (e) paleontology, (f) economic geology, (g) sedimentation, (i) stratigraphy, (j) geophysics, and (k) petroleum. Requires a written final report. Prerequisite: consent of sponsoring faculty.

GEOL 810. Advanced Graduate Studies in Geology (1–6). Systematic study in a selected topic of professional or applied geology. Course given upon demand. May require field trips. Repeatable for credit when content differs. Prerequisites: graduate standing, instructor's consent, and two years of professional postgraduate practice in geology.

GEOL 821. Special Studies in Geochemistry (3). A systematic study in selected areas of geochemistry. Content differs upon demand to provide in-depth analysis in fields of (a) sedimentary carbonate and silicate geochemistry and mineralogy, (b) organic geochemistry, (c) high pressure and temperature thermodynamics of earth materials, (d) exploration geochemical geochemistry, (e) exogenic geochemical cycling, (f) stable isotope geochemistry. May require some laboratory work. May be repeated for credit to cover all six areas listed. Prerequisite: GEOL 720 or instructor's consent.

GEOL 826. Sedimentary Petrology (3). 2R; 3L. Detailed study of sedimentary rocks and their origins. Facilitates determinations of mineral compositions, textures, structures, fabrics, and petrogenetic relationships by the use of thin sections, peels, and geochemical analyses. May require field trips. Prerequisite: GEOL 526.

GEOL 830. Field Studies in Geology (2–6). Off-campus, systematic field study in a selected area or region of geologic significance. Course given upon demand. Where appropriate, travel, lodging, and board costs are charged. Repeatable for credit when locality and content differ. Prerequisites: summer field geology (or equivalent) and instructor's consent.

GEOL 840. Geotectonics (3). Physical and geological principles of crustal deformation and tectonic interpretation. Studies the relationship of interior earth processes to crustal deformation with special reference to global tectonics. May require field trips. Prerequisite: instructor's consent.

GEOL 852. Field Stratigraphy (3). 2R; 3L. Advanced concepts and principles of stratigraphic analysis and interpretation emphasizing original sources and current research investigations. Required field problem and field trips. Prerequisites: GEOL 544 and 552 or instructor's consent.

GEOL 860. Special Topics in Geophysics (3). Systematic study in one or more selected topics of theoretical and applied geophysical techniques. Emphasizes applications of state-of-the-art concepts and principles to problems of regional to global significance. Potential topics include seismic stratigraphy, vertical seismic profiling, reservoir petrophysical response estimations, shallow aquifer geophysical modeling, geophysical basin modeling, and regional and global environmental modeling. Prerequisites: GEOL 681, 760; MATH 344 or 555; or instructor's consent.

GEOL 870. Advanced Biogeology (3). 2R; 3L. Paleocological reconstruction of ancient plant/animal communities and environments emphasizing community structure, biostratigraphy, synthesis of total raw data, and problem solving. May require field trips. Prerequisite: a course in biogeology or equivalent.

GEOL 881. Special Topics in Numerical Geology (3). Systematic study in one or more topics of theoretical and applied quantitative analysis appropriate for environmental and geological research. Emphasizes applications of state-of-the-art concepts and principles to problems of regional to global significance. Potential topics include quantitative shape analysis, petrographic image analysis, multi-variable linear and non-linear unmixing, extrapolation and interpolation techniques, quantitative isotope chronostratigraphic techniques, modeling global phenomena, and simulations of multi-phase flow in aquifers and reservoirs. Prerequisites: GEOL 681, 781, and Math 344 or 555; or instructor's consent.


Gerontology
See Community Affairs, School of.

History (HIST)

Graduate Faculty

Distinguished Professors: H. Craig Miner (Willard W. Garvey Distinguished Professor of Business History), Niall Shanks (Curtis D. Gridley Distinguished Professor in the History and Philosophy of Science)

Professors: John E. Dreifort (graduate coordinator), Anthony P. Gythiel, Phillip D. Thomas

Associate Professors: Judith R. Johnson (chairperson), Willard C. Klunder, Ariel Loftus, Keith H. Pickus (associate provost for academic affairs and research), Jay Price (director of public history program), Craig L. Torbenson

Assistant Professors: George Dehner, Robin Henry, Helen Hundley, Robert Owens

Master of Arts and Areas of Specialization

The history department offers courses of study leading to the Master of Arts (MA) degree with specializations in U.S. history, European history, and public history.
Admission Requirements
Admission to the MA program in history requires completion of an undergraduate major in history, or a minimum of 15 hours of history; a grade point average of 2.75 or better, including all undergraduate hours; and a 3.000 grade point average in history. Under unusual circumstances applicants with less than a 3.000 average in history may be granted a probationary or conditional admission. International students are required to have a minimum TOEFL score of 600 paper-based, 250 computer-based, or 100 Internet-based, or an overall band score of 7.5 on the IELTS.

Degree Requirements
Students may follow one of three plans for a graduate degree in history: a thesis program, a nonthesis program, and a program in public history.

Thesis Program

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
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<tbody>
<tr>
<td>HIST 725 Advanced Historical Methods</td>
<td>3</td>
</tr>
<tr>
<td>HIST 727 Readings in History</td>
<td>3</td>
</tr>
<tr>
<td>HIST 730, 733 Seminars</td>
<td>9</td>
</tr>
<tr>
<td>HIST 500- and 600-level courses</td>
<td>12</td>
</tr>
<tr>
<td>HIST 801 Thesis Research</td>
<td>2</td>
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<tr>
<td>HIST 802 Thesis</td>
<td>2</td>
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</tbody>
</table>

Total: 31 Hrs.

At least one seminar and one lecture-based course must be taken outside of the student's primary comprehensive field.

Students must pass a foreign language competency examination, pass a written examination in one comprehensive field, and pass an oral examination in defense of the thesis. The written examination must precede the oral examination.

Nonthesis Program

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
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<tbody>
<tr>
<td>HIST 725 Advanced Historical Methods</td>
<td>3</td>
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<tr>
<td>HIST 727 Readings in History</td>
<td>6</td>
</tr>
<tr>
<td>HIST 730, 733 Seminars</td>
<td>12</td>
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<tr>
<td>HIST 500- and 600-level courses</td>
<td>12</td>
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</tbody>
</table>

Total: 35 Hrs.

Students must pass written examinations in two comprehensive fields.

Thesis Program in Public History

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
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<tbody>
<tr>
<td>HIST 701 Introduction to Public History</td>
<td>3</td>
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<tr>
<td>One course selected from the following:</td>
<td>3</td>
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<tr>
<td>HIST 702, Hist. Preservation</td>
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<td>HIST 703, Museum Admin.</td>
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<tr>
<td>HIST 705, Intro. to Archives</td>
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<tr>
<td>HIST 725 Advanced Historical Methods</td>
<td>3</td>
</tr>
<tr>
<td>HIST 730, 733 Seminars</td>
<td>6</td>
</tr>
<tr>
<td>HIST 500- and 600-level courses</td>
<td>12-14</td>
</tr>
<tr>
<td>HIST 801 Thesis Research</td>
<td>2</td>
</tr>
<tr>
<td>HIST 802 Thesis</td>
<td>2</td>
</tr>
</tbody>
</table>

HIST 803* Internship: 2-4 Hrs.

Total: 35 Hrs.

HIST 803*, Cooperative Education in History, may be substituted for HIST 803 with the consent of the director of the public history program.

Comprehensive Fields. Students may select from the following areas for their comprehensive examinations.

- U.S. History
  - The Ancient and Medieval Worlds
  - Modern Europe
- Public History

Courses for Graduate/Undergraduate Credit

HIST 501. The American Colonies (3). Colonization of the New World emphasizing the British colonists and their development.

HIST 502. The American Revolution and the Early Republic (3). Examination of selected phases of the Revolutionary, Confederation, and Federal periods.

HIST 503. The Age of Jefferson and Jackson (3). Examines the eras of Thomas Jefferson and Andrew Jackson; that is, roughly the period from 1800 to 1850. During that time, the United States experienced tremendous territorial growth; cultural ferment and reform movements; engaged in two major international wars and a number of Indian conflicts; and moved toward the sectional showdown over slavery that culminated in a bloody civil war. The focus is on political, social, and military history, as America expanded from the Mississippi River across the North American continent.

HIST 504. Civil War (3). Explores the origins and history of the bloodiest war this nation has ever fought. Students study antebellum America, focusing on the sectional differences between North and South, the institution of slavery, and the abolitionist crusade; and the battlefields of the Civil War.

HIST 505. The United States, 1865 to 1900 (3). Covers the great economic, political, social, and moral questions of the late 19th century. Includes industrialism, the frontier, the city, immigration, race, class, culture, empire, gender, and reform.


HIST 507. The United States, 1900–1945 (3). Major topics explored include World War I, the Great Depression, and World War II. While this period in U.S. history is noteworthy for conflict, consensus in the form of Progressivism, the New Deal, and the emergence of the modern presidency also characterize these decades. An examination of political leadership is a major component of this course. The emphasis, however, is "history from the bottom up" as the lives of ordinary Americans are examined.

HIST 508. The United States Since 1945 (3). In this time period, the United States emerged as a world leader. Although the Cold War became defining force both at home and abroad, "hot" wars in Korea and Vietnam also produced social, economic, and political repercussions in the United States. Course explores major issues and events of the period with a focus on international relations, the Civil Rights Movement, and the growth of the imperial presidency.

HIST 511. Women in Early America, 1600–1830 (3).

HIST 512. Women and Reform in America, 1830–Present (3).


HIST 516. History of American Business (3). A history of American business enterprise from Colonial times to the present, emphasizing the industrial age since the Civil War, in case studies of individual firms, in biographies of business people, and in the social and political impact of business.


HIST 521. Diplomatic History of the United States to 1914 (3). Beginning with the Colonial era, this course examines the diplomatic history of the United States and the brink of American participation in the First World War. Focuses on the movement toward independence, territorial expansion across the continent, the Civil War and the emergence of America as a world power.

HIST 522. Diplomatic History of the United States Since 1900 (3). Examines American diplomatic history during the 20th century; that is, from the era of Theodore Roosevelt and the "big stick" through the presidency of Bill Clinton. This was a period when the United States emerged as a major player in global affairs, engaged in numerous military conflicts, waged a cold war against the "evil empire" of the Soviet Union, and ultimately stood alone as the world's only economic and military super power.

HIST 525. American Military History (3). Surveys the American military heritage and its role in shaping the modern United States. Studies the history of warfare from frontier conflicts during the Colonial period through Desert Storm; focusing on the most significant wars and battles, and the evolution of military institutions and their impact on American social, economic, and political traditions.

HIST 528. History of Wichita (3). A history of Wichita, Kansas, 1865–present, emphasizing the lessons of local history for future planning and its importance to an individual citizen's sense of place.

HIST 530. The American Woman in History (3). Examination of the history, status, and changing role of women in American society.

HIST 531. American Environmental History (3). Examines the historical, physical, economic, scientific, technological, and industrial interactions of the peoples of America with their environment. Emphasizes the period, 1800–present.

across space and time in U.S. history. Employing a female-centered framework of analysis, course probes the intersections of race, class, gender, and sexuality in women’s lives.

HIST 533. The American City: from Village to Metropolis (3). A study of urbanization and urban life from Colonial times to the present—changing lifestyles and thought patterns, urban architecture, ethnic assimilation, emergence of the suburb, political and ecological adjustments, and the influence of new technology and forms of business organization.

HIST 534. History of the Old South (3). Examines Southern civilization prior to the American Civil War.

HIST 535. History of Kansas (3). History of the Kansas region from Spanish exploration to the present, emphasizing the period after 1854.

HIST 536. Survey of American Indian History (3). Surveys the history of Native American nations from pre-historic times to the present. Includes the process of European colonization and indigenous responses; the strategies of accommodation, assimilation, and resistance; and the resurgence of tribalism in the 20th century.

HIST 537. The Trans-Mississippi West (3). Spanish, French, and Anglo-American penetration and settlement west of the Mississippi River from the 16th century to about 1900.

HIST 538. The American West in the 20th Century (3). Explores the growth of the trans-Mississippi West in the 20th century, emphasizing political development, economic growth, cultural manifestations, the role of minority groups, and the impact of science and technology.

HIST 541. Modern France (3). History of the major trends in French history from Napoleon to DeGaulle emphasizing French attempts to adjust politically, socially, economically, and culturally to the changing conditions of modern industrial society.

HIST 553. History of Mexico (3). "Poor Mexico: So far from God, so close to the United States." Examines the influences of the Maya, the everyday life of the Aztecs, and the destruction wrought when the Spanish invaded the New World. Major figures and the roles they played in Mexican history such as Santa Anna, Benito Juarez, and Porche Villa emerge in this study. Course concludes with the impact of a 2000-mile border with the United States and a brief look at NAFTA.

HIST 558. The Ancient Near East (3). Examines the social, political, and cultural history of the Mediterranean and Near East from the foundation of cities and the invention of writing in the third millennium to the Dark Ages. Covers the major civilizations of Mesopotamia, Iran, Egypt, and Syria-Palestine through both their writings and material remains. Special attention is given to the Minoans and Mycenaeans.

HIST 559. Classical Athens (3). Focuses on Athens from the sixth to the fourth centuries, from the emergence of the Greek city state to the age of Demosthenes. Examines how Athens founded and maintained the earliest democracy and how individuals such as Socrates, Pericles, Plato, and Aristotle fit into their society. Other topics may include warfare, the family, farming, commerce, and the law.

HIST 560. The Hellenistic World and Rise of Rome (3). Begins with the conquests of Alexander the Great and provides an overview of the new Greek world which he left behind. Examines changes in Greek culture and society as a result of thespread of Hellenism to the older kingdoms of the Near East and India. Includes the rise of the Roman Republic in the context of the Greek world in the first century B.C. with the defeat of Cleopatra, or the last queen of Egypt.

HIST 562. The Roman Republic (3). Covers the period of early Roman history from the founding of the city to the first emperor Augustus. Includes coverage of wars and the Roman army, government, society, and culture. Emphasizes the end of the republic during the dictatorship of Julius Caesar, the civil wars, and the role of the emperor Augustus.

HIST 563. The Roman Empire (3). Focuses on social and cultural achievements of the Roman empire starting with the dissolution of the republic and the invention of the empire by Emperor Augustus in the first century B.C. Ends with the sack of Rome in the fifth century A.D. Emphasizes the spread of Roman law, government, and culture to areas outside of Italy, including Roman Britain, Judea, and Roman Egypt; the rise of Christianity; and the reasons for the decline of Rome.

HIST 566 & HIST 567. Medieval History (3 & 3). 566: the history of Europe from the fall of the Roman Empire through the Crusades, 500 to 1200. 567: history of Europe, 1200 to 1500.

HIST 568. Social, Economic, and Intellectual History of the Middle Ages (3). Examines fundamental themes in the development of the social, economic, and intellectual history of the Middle Ages, emphasizing the rise of cities, universities, scholastic thought, diverse patterns of daily life, and economic activities of the Middle Ages.

HIST 569. Medieval England (3). An examination of the development of Medieval England from the Anglo-Saxon Invasions until the end of the 14th century. The Norman Conquest, the rule of the Angesvins, the reign of Edward I, and the daily life of those peoples who became the English receive particular attention.

HIST 575. The Italian Renaissance (3). Italian history from the 14th through the 16th centuries emphasizing cultural achievements.

HIST 576. The Reformation (3). The great religious changes in the 16th century in the political, social, and intellectual contexts.

HIST 577. Medieval Women (3). Deals with the lives and accomplishments of Christian women in Late Antiquity and the Middle Ages.

HIST 581. Europe, 1789–1870 (3). A focused survey of European social, cultural, and political history from 1789–1870. Among the topics covered are the Enlightenment, the French Revolution, industrialization, Romanticism, nationalism, liberalism, socialism, the revolutions of 1848, and the role of women in European society.

HIST 582. Europe, 1871–1945 (3). A focused survey of European history between the years 1871–1945. Among the subjects covered are the phenomena of nation building and the imperial project, the rise and growth of European socialism, the emergence of a "mass society," and the role of women and minorities, the origins and impact of World War I, inter-war politics and diplomacy, the Nazi Era, and World War II.


HIST 588. History of Early Russia (3). Covers the social, political, and cultural history of Kievan and Muscovite Russia.

HIST 589. History of Imperial Russia (3). A survey of the political, social, and cultural history of Imperial Russia.

HIST 592. History of the Soviet Union (3). A survey of Soviet history from the Bolshevik Revolution to the present.

HIST 593. Former Soviet Union (3). An examination of contemporary life in the former USSR: historical background, Marxist/Leninist ideology, industrial and agricultural economies, roles played by women, national minorities and dissidents in Soviet society, the press, literature and art, health care, and prospects for the country’s future.

HIST 639. Religion in America (3). Covers major trends in American religious history focusing on the scholarly issues related to the study of these subjects. Students explore such subjects as religious awakenings, fundamentalism, Pentecostalism, and rationalism and examine how historians have studied and disagreed over these topics.

HIST 698. Historiography (3). Required of graduate history majors. This capstone course engages students in a systematic analysis of major historians and schools of historical thought. Class assignments and discussions encourage students to examine their own ideas about history as an academic discipline. Prerequisite: 12 upper-division hours in history or instructor’s consent.

HIST 701. Introduction to Public History (3). Introduces the various areas of public history including historic preservation, archival administration, museum studies, litigation support, and corporate history. Students learn the philosophies, techniques, and practices that comprise the field and ways these areas interact with their academic training. Prerequisite: graduate standing or instructor’s consent.

HIST 702. Historic Preservation (3). Advanced survey of the multifaceted, multidisciplinary field of historic preservation. Presents a broad and sophisticated view of the many arms of preservation in the U.S., as well as the numerous opportunities available to trained professionals in the field. Prerequisite: HIST 701 or instructor’s consent.

HIST 703. Museum Administration (3). Addresses the many facets of museum administration from a specialist’s point of view. Covers collecting, management, law and ethics, and resource development. Gives a close view of the operations of American museums. Prerequisite: HIST 701 or instructor’s consent.

HIST 704. Interpreting History to the Public: Explaining the Past (3). Looks at ways history can be communicated to audiences, including scholarly texts, popular written histories, movies, videos, guidebooks, museums, and other similar media. Explores the differences between various forms of historical
communication and assesses the ways they reach audiences. Students learn to discern various components of historical texts to use in the design of interpretation materials on their own. Prerequisite: HIST 701 or instructor's consent.

HIST 705. Introduction to Archives (3). Introduces the basic knowledge, theory, and related skills of archival administration, including the nature of information, records, and historical documentation; the role of archives in modern society; and issues and relationships that affect archival functions. Covers the theory and skills necessary to understand and apply basic archival functions. Prerequisite: graduate standing and/or instructor's consent.

HIST 725. Advanced Historical Methods (3). Reviews basic historical research methods, the general character of field bibliographies and recent interpretations, and the techniques of professional narrative development. Required of graduate degree students during their first year of enrollment. Prerequisite: departmental consent.

HIST 727. Readings in History (3). Readings in ancient, medieval, modern, European, and American field bibliographies. Repeatable for credit. Prerequisite: departmental consent.

HIST 730. Seminar in American History (3). Repeatable for credit. Prerequisite: departmental consent.

HIST 733. Seminar in European History (3). Repeatable for credit. Prerequisite: departmental consent.

HIST 750. Workshop in History (1–3). Repeatable for credit but does not satisfy requirements for history majors.

HIST 781. Cooperative Education in History (2). Graduate history students participate in internship experiences through the cooperative education program. May substitute for HIST 803. A maximum of 4 credit hours of any combination of HIST 803 and HIST 781 may count toward degree requirements with permission from the program area. Offered Cr/NCr only. Prerequisite: instructor's consent.

Courses for Graduate Students Only

HIST 801. Thesis Research (1–2).

HIST 802. Thesis (1–2).

HIST 803. Internship in Public History (1–4). Public history students practice their skills in summer or semester internships. Type and level of responsibility varies depending on student's interests and work setting. Internship should be in area related to student's MA thesis. Prerequisites: HIST 701 and consent of public history faculty.

HIST 810. Special Topics in History (1–3). Repeatable for credit to a maximum of 6 hours.

Hugo Wall School of Urban and Public Affairs

See Urban and Public Affairs, Hugo Wall School of.

Liberal Studies (LASI)

Graduate Coordinator: David Soles (philosophy) 
Advisory Committee: Wilson Baldridge (modern languages), Dorothy Billings (anthropology), Doris Chang (women's studies), Xiufen Lu (philosophy), Jay Price (history)

The Master of Arts in Liberal Studies (MALS) program is designed for people who wish to pursue a particular topical or interdisciplinary interest at the graduate level. The liberal studies program offers students an opportunity to design a program of study to answer their particular needs and interests in a focused, coherent manner.

Admission Requirements

Applicants must have a bachelor's degree from an accredited institution. Applicants must also have a grade point average of 3.000 or better for the last 60 hours of coursework. No more than 6 hours of graduate credit from another institution will be considered for transfer into the liberal studies program.

When submitting an application to the Wichita State Graduate School, students must contact the MALS office for an initial interview with the graduate coordinator. In addition, students must complete a brief essay describing their motivation for selecting the liberal studies program, outlining their proposed three areas of study and showing how the program will contribute to their educational and career goals. Deadlines for application are April 1 for the fall semester and October 1 for the following spring semester.

The Liberal Studies Advisory Committee may request that the applicant submit Graduate Record Examination scores (verbal and quantitative).

Three graduate faculty members representing at least two of the three departments in which the student's work will be concentrated should be secured as program advisers. One of these advisers, who must be a graduate faculty member of Fairmount College of Liberal Arts and Sciences, will serve as the student's primary adviser and chair the student's committee.

Before completing the first 12 hours of graduate work in the program, the student must:

1. Select members of the faculty thesis or terminal project committee and inform the graduate coordinator;
2. With the assistance of this committee, prepare a plan of study to be approved by the graduate coordinator and the Graduate School; and
3. Complete LASI 800, Research Goals and Strategies, for 3 credit hours.

Once accepted by the Graduate School, the plan of study becomes the student's individualized curriculum and any changes to it must be approved by the student's thesis or terminal project committee.

Degree Requirements

The structural framework for the degree is a plan of study, developed by the student in consultation with faculty in the program. It must include:

1. A minimum of 36 credit hours;
2. No more than 12 credit hours from any one department;
3. A maximum of 12 hours in a college other than liberal arts and sciences;
4. At least 22 of the 36 total hours in courses numbered 700 or above;
5. Three of the 36 hours in LASI 800, Research Goals and Strategies; and
6. A master's thesis for 6 hours credit or a terminal project for 6 hours credit.

Graduate Certificate in Great Plains Studies

Fairmount College of Liberal Arts and Sciences offers a graduate certificate in Great Plains Studies, an interdisciplinary program for professional or personal enrichment. This certificate is for students interested in taking a concentration of courses from a number of disciplines focusing on a common topic, the Great Plains.

Requirements: Graduate students must meet requirements for admission to the WSU Graduate School in a degree program or nondegree category A status. They must have a cumulative grade point average of at least 3.000 for all courses comprising the graduate certificate program with no grade below C. The Graduate School does not accept transfer credit for certificate programs.

Great Plains Studies students enrolled in LASI 800 work with the instructor and the Great Plains Studies coordinator to develop an appropriate focus.

Students complete 20 hours of coursework, including three required courses (LASI 501, 510, and 800) with the remaining courses selected from these designated courses: ANTH 612, 613; BIOL 503, 575; ENGL 860, GEOI 562, 570; HIST 535, and HIST 536.

Courses for Graduate/Undergraduate Credit

LASI 501. Great Plains Experience (1–3). Offered during fall and spring semesters as a 1-hour field experience and in the summer session as a 3-hour field experience. For students in the Great Plains Studies certificate program. Visit museums, anthropological and archeological sites, nature preserves, and other places of significance in
Great Plains Studies. Prerequisite: LASI 201 or 800 or instructor’s consent.

LASI 510. Great Plains Seminar (3). For students completing the Great Plains Studies certificate program. Focuses on contemporary issues and critical contexts for research. Students develop research projects appropriate to their classification as undergraduates or graduates and which reflect their particular interests in Great Plains Studies. Supplemental resources provided by faculty through lectures, consultation, course materials, and mentoring. Prerequisites: 12 hours of Great Plains Studies coursework, including LASI 201 and 501; undergraduates must have senior status or instructor’s consent.

LASI 680. International Student Exchange Program—Graduate (9). The international student exchange program encourages graduate students to attend a university outside the USA while retaining full-time student status and paying regular tuition at WSU. A student who wishes to enter this program must apply. Application forms may be obtained from the WSU Office of International Education; after that the student meets with his or her assigned program adviser to request academic and course equivalent approval to attend the proposed university. Upon approval from the student’s WSU program, application may be completed. The enrollment designation documents the status and the tuition payment of the student enrolled in ISEP for the duration of the residence at the collaborating university. At the end of the exchange semester, all coursework from the selected university will be transferred to WSU. At that time, the transfer course(s) will replace the LASI hours of enrollment with only the International Student Exchange Program designation remaining on the transcript.

LASI 750. Workshop: Special Topics (1–3). Meets identified needs of specific audiences.

Courses for Graduate Students Only

LASI 800. Research Goals and Strategies (3). Introduces the methodology and practice of interdisciplinary research. Emphasizes the integration of methods native to the humanities, social sciences, and natural sciences. Develops skills required for the writing of research papers and theses. Required of all students in the Master of Arts in Liberal Studies (MALS) program during the first 12 hours of coursework.

LASI 875. Thesis (1–6). For students who are finishing the Master of Arts in Liberal Studies. The student writing a thesis in this course until the thesis is completed and all thesis requirements have been satisfied. Prerequisite: consent of student’s degree committee chairperson and instructor.

LASI 885. Terminal Project (1–6). For students who are near the end of their MALS program and involved in a terminal project. The terminal project may have many aspects such as field work, practice, curriculum development, or some other individualized activity. The project must be approved by the student’s advisory committee and the MALS graduate coordinator prior to beginning work on any terminal activity, whether thesis or project. While the terminal project allows for more creative flexibility than the thesis option, students and their terminal project committee should be aware that the standards of quality and research expectations are equivalent. The student involved in a project must be enrolled in this course until the project is completed and all project requirements have been satisfied.

Linguistics (LING) Graduate Faculty

Professor: Tina L. Bennett

Although there is no graduate program in linguistics, the following courses are available for graduate credit.

Group A—Basic Linguistic Theory

Courses for Graduate/Undergraduate Credit

LING 667. English Syntax (3). Cross-listed as ENGL 667. Studies the basic principles of English syntax, covering the major facts of English sentence construction and relating them to linguistic theory. Prerequisite: LING 315 or equivalent or departmental consent.

LING 672. Dialectology (3). Cross-listed as ENGL 672. Introduces the study of language variety, emphasizing regional and social dialect in America and methods of studying it. May be repeated for credit when content varies. Prerequisite: LING 315 or departmental consent.

Group B—Linguistic Study of Specific Languages or Language Groups

Courses for Graduate/Undergraduate Credit

LING 505A. Advanced French Phonetics and Diction (2). Cross-listed as FREN 505. Includes articulatory phonetics, phonemics, sound/symbol correspondences, dialectal and stylistic variations. Required for future French teachers. Prerequisite: any 200-level course or departmental consent.

LING 505B. Russian Phonology (2). Cross-listed as RUSS 505.

LING 505C. Spanish Phonetics (2). Cross-listed as SPAN 505.

LING 635. Introduction to Romance Linguistics (3). Cross-listed as FREN 635 and SPAN 635. Provides a comparative examination of the phonology, morphology, and syntax of the major contemporary Romance languages (French, Spanish, Italian, Portuguese, Catalan, and Romanian). Introduces students to the sound and writing system and basic grammar of Latin and contrasts the phonological and grammatical systems of the contemporary Romance languages (French and Spanish in particular) with those of Latin. It compares specific features of the modern Romance languages synchronically (i.e., apart from Latin) as well. Students are advised to have a solid grounding in at least one Romance language (preferably French or Spanish) and a familiarity with at least one other (French, Spanish, Latin, Italian, or Portuguese). Prerequisite: departmental or instructor’s consent.

LING 720. Seminar in Old English (3). Cross-listed as ENGL 720. Advanced course in Old English language and literature. Studies the Old English language in enough detail to enable the reading of some prose and poetry, including parts of Beowulf and the elegiac poems in the original. Some literature, including all of Beowulf, is read in translation. Particular attention is given to close reading and interpretation of the text, and to important literary and cultural features of the period and its Norse heritage. Repeatable once for credit with a change of content and departmental consent.

Group C—Areas of Contact Between Linguistics and Other Disciplines

Courses for Graduate/Undergraduate Credit

LING 651. Language and Culture (3). Cross-listed as ANTH 651 and MCLL 651. Prerequisite: 3 hours of linguistics or MCLL 351 or 6 hours of anthropology.

LING 740. Graduate Studies in Linguistics (3). Selected topics in theories of language and methods of linguistic study. Repeatable for credit with departmental consent.

Others

Courses for Graduate/Undergraduate Credit

LING 590. Linguistics. Special Studies (2–3). Topic selected and announced by individual instructor. Credit is assigned to Group A, B, or C depending on content. Repeatable for credit when content varies.

LING 595. Linguistics. Directed Readings (2–3). Credit assigned to Group A, B, or C depending on content. Repeatable for credit.

Mathematics and Statistics

Graduate Faculty

Distinguished Professor: Victor Isakov (Emlyou Keith and Betty Dutcher Distinguished Professor of Mathematics)

Professors: Andrew Acker, Alexandre Boukhgueim, Dharam V. Chopra, Thomas DeJillo, Alan R. Elcrat, Buma L. Fridman (chairperson), John J. Hutchinson, Kirk E. Lancaster, Daowei Ma, Kenneth G. Miller (graduate coordinator), Zhiren Jin, Hari Mukerjee, Phillip E. Parker, Zaqi Sun

Associate Professors: Stephen W. Brady, Lop-Hing Ho, Xiaowei Hu, Chunsheng Ma

Assistant Professors: Thalia Jeffreys, Tianshi Lu, John Robertson, Christian Wolf

The Department of Mathematics and Statistics offers courses of study leading to the Master of Science (MS) degree in mathematics and the Doctor of Philosophy (PhD) degree in applied mathematics.

Mathematics (MATH)

Master of Science

Admission Requirements

Students will be admitted to full graduate standing if they have the equivalent of an undergraduate degree in mathematics, have a grade point average of at least 3.000 in mathematics courses, and meet Graduate School admission requirements.
Degree Requirements

To complete the MS degree, students must earn 33 credit hours of graduate credit*, with a minimum of 24 credit hours in courses in mathematics or statistics offered by the department (exclusive of thesis) numbered 700 or above. The 33 hours must include the completion of three two-semester sequences in mathematics and/or statistics numbered 700 or above.

Students who plan to enter the PhD program in applied mathematics should include Real Analysis I and II (MATH 743 and 843) and Numerical Linear Algebra (MATH 751) in their MS program of study.

Generally not more than 6 hours of approved coursework may be transferred from another university. Students may take either a thesis or a nonthesis option. Students electing to write a thesis should enroll in MATH 885 for up to 6 hours credit. A student's program must be approved by the department.

An oral comprehensive examination is required of all degree candidates. For students electing the nonthesis option, the exam covers four courses, numbered 700 or above, chosen by the student. For students electing the thesis option, the comprehensive examination takes place at the same time as the thesis defense. The examination normally concentrates on the thesis, plus possibly two courses, numbered 700 or above, chosen by the student.

A student in the PhD program in applied mathematics who does not have a previous master's degree in mathematics will be eligible to receive the MS degree in mathematics upon satisfying the following: a) completion of at least 33 hours in mathematics courses applicable toward the PhD degree course requirements, and b) passing the PhD qualifying exam. In such cases the qualifying exam will constitute the comprehensive exam for the MS degree.

*Complex and Vector Analysis for Engineers (758) and mathematics or statistics courses numbered below 600 do not count toward the 33 hours needed for the MS in mathematics.

Dual/Accelerated Bachelor's to Master's Program. The dual/accelerated bachelor's to master's program in mathematics and statistics is a coordinated program leading to both a bachelor's and master's degree. Admission requirements for the program are given in the Undergraduate Catalog. A student admitted to the dual/accelerated program in mathematics and statistics as an undergraduate may take up to 9 joint degree credit hours—hours at the 700-level (or above) that are applied toward both the bachelor's degree and master's degree program requirements. A course taken for joint credit must be so identified at the time of enrollment in that course. A student in the dual/accelerated program will be admitted to the MS program in mathematics upon being awarded the bachelor's degree if all admission requirements for the master's program are satisfied at that time.

Students admitted to the dual/accelerated program are expected to write a thesis as part of their master's degree program of study.

Doctor of Philosophy

The primary emphasis in the doctoral program in applied mathematics is partial differential equations, probability and statistics, and computational mathematics.

Admission Requirements: Admission to the PhD program in applied mathematics requires completion of an undergraduate degree in mathematics and/or statistics, or the equivalent, including coursework in advanced calculus, linear algebra, modern algebra and numerical methods. A grade point average of 3.250 in coursework in mathematics and statistics is required, as well as an overall GPA of 3.000 for the last 60 hours (3.250 if the student has a previous master's degree). The GRE subject test in mathematics is recommended but not required.

Degree Requirements

To complete the PhD program in applied mathematics, the student must satisfy the course, language, and residency requirements given below; pass the qualifying and preliminary examinations; and write a dissertation containing original research in applied mathematics.

Course Requirements: A total of at least 84 hours of graduate credit is required. Partial Differential Equations for Engineers (MATH 757) and Complex and Vector Analysis for Engineers (MATH 758) and mathematics or statistics courses numbered above 800 (exclusive of PhD Dissertation, MATH 985). Courses used toward a master's degree may be included. A maximum of 36 hours may be transferred from another university at the discretion of the student's committee.

Real Analysis I and II (MATH 743 and 843) and Numerical Linear Algebra (MATH 751) are required of all students. In addition a student must complete one of the following two sets of requirements:

1. Complex Analysis I and II (MATH 745 and 845), Partial Differential Equations I and II (MATH 755 and 856), Functional Analysis I and II (MATH 941 and 942), and Numerical Analysis of Partial Differential Equations (MATH 852).
2. Theory of Statistics I and II (STAT 861 and 862), Theory of Probability I and II (STAT 870 and 871), and Theory of Linear Models I and II (STAT 872 and 873).

Language Requirements: The student must demonstrate proficiency either in two foreign languages or in one foreign language and one high level computer language. The foreign languages are Chinese, French, German, and Russian. The language proficiency will be demonstrated by passing an examination that consists of the translation, with the use of a dictionary, of one or more passages of mathematics text from the foreign language into English.
Residency Requirement: The student must complete at least one academic year in residence as a full-time student at WSU.

Qualifying Exam: The qualifying exam is a written exam administered near the middle of both the fall and spring semesters. The exam is a six-hour exam given on two different days within a one week period. The topics covered by the exam are real analysis, numerical analysis, advanced calculus, and linear algebra. The exam should be taken at the first opportunity after completing Real Analysis I and II (MATH 743 and 843) and Numerical Linear Algebra (MATH 751).

A student who does not pass on the first attempt may be permitted to take the exam a second time. A person who retakes the exam must retake the entire exam. The exam may be retaken only once.

PhD Committee: Upon the student passing the qualifying exam, the graduate coordinator, in consultation with the student, recommends to the departmental PhD Advisory Committee a PhD committee for the student. The student's PhD committee consists of the student's dissertation adviser as chair and four other members. At least one, but no more than two, of the committee members shall be from departments outside the department of mathematics and statistics. Within one semester after passing the qualifying exam the student should submit a plan of study to the committee for approval. This committee serves as examining committee for both the preliminary and final exams.

Preliminary Exam: The preliminary exam covers specific topics relevant to the student's research area as determined by his or her PhD committee. The student should meet as soon as possible with the committee to set the topics to be covered. For full-time students, the exam should normally be taken about one year after passing the qualifying exam. Before the preliminary exam is taken, one of the two language requirements must be satisfied. A student who fails the preliminary exam may be permitted to retake the exam if the committee so determines.

Dissertation and Final Exam: Upon passing the preliminary exam, the student becomes a candidate for the PhD degree. Soon thereafter the student must submit a written dissertation proposal to his or her committee for approval. While working on the dissertation, the student should enroll for a total of at least 18 hours of PhD dissertation. The student must be enrolled at the university during each semester after admission to candidacy until completion of the dissertation. After the dissertation is completed, the student must present and defend it before the committee. This defense constitutes the final exam. The dissertation defense is open to the public.

Courses for Graduate/Undergraduate Credit
Credit in courses numbered below 600 is not applicable toward the MS in mathematics.

MATH 501. Elementary Mathematics (5). A study of topics necessary to an understanding of the elementary school curriculum, such as set theory, real numbers, and geometry. Not for major or minor credit. Prerequisite: elementary education major and MATH 111 or equivalent with a grade of 2.00 or better or departmental consent.

MATH 502. Mathematics for Middle School Teachers (5). A study of the mathematical knowledge which forms the theoretical foundations of, the applications of, and extensions of middle school mathematics. This capstone course serves to reinforce mathematics skills learned in prerequisite courses and assists students in recognizing the unifying principles within their mathematical experiences. Prerequisites: MATH 111, 121, 123, 144, 501, and STAT 370 or equivalent with a grade of a grade point of 2.00 or better in each.

MATH 511. Linear Algebra (3). An elementary study of linear algebra, including an examination of linear transformations and matrices over finite dimensional spaces. Prerequisite: MATH 243 with a grade point of 2.00 or better.

MATH 513. Fundamental Concepts of Algebra (3). Defines group, ring, and field and studies their properties. Prerequisites: MATH 415 and 511 with a grade point of 2.00 or better or departmental consent.

MATH 525. Elementary Topology (3). Studies topological spaces, open and closed sets, bases for topology, continuous mappings, homeomorphisms, connectedness and compactness, Hausdorff and other spaces, with special emphasis on metric spaces. Prerequisite: MATH 415 with a grade of 2.00 or better.

MATH 530. Applied Combinatorics (3). Basic counting principles, occupancy problems, generating functions, recurrence relations, principles of inclusion and exclusion, the pigeonhole principle, Fibonacci sequences, and elements of graph theory. Prerequisite: MATH 344 with a grade point of 2.00 or better.

MATH 531. Introduction to the History of Mathematics (3). Studies the development of mathematics from antiquity to modern times. Solves problems using the methods of the historical period in which they arose. Requires mathematical skills. Prerequisites: MATH 511 and two additional courses at the 500 level or above, with a grade point of 2.00 or better in each.

MATH 545. Integration Techniques and Applications (3). Studies the basic integration techniques used in applied mathematics. Includes the standard vector calculus treatment of line and surface integrals, Green's Theorem, Stokes's Theorem, and the Divergence Theorem. Also includes the study of improper integrals with application to special functions. Prerequisite: MATH 344 with a grade point of 2.00 or better.

MATH 547. Advanced Calculus I (3). Covers the calculus of Euclidean space including the standard results concerning functions, sequences, and limits. Prerequisites: MATH 344 and 415 with a grade point of 2.00 or better in each.

MATH 548. Introduction to Complex Variables (3). Study of complex numbers, analytic functions, differentiation and integration of complex functions, line integrals, power series, residues and poles, and conformal mapping with applications. Prerequisites: MATH 344 with a grade point of 2.00 or better.

MATH 551. Numerical Methods (3). Approximating roots of equations, interpolation and approximation, numerical differentiation and integration, and the numerical solution of first order ordinary differential equations. Some computer use. Prerequisites: MATH 344 and 451 with a grade point of 2.00 or better or departmental consent.

MATH 553. Mathematical Models (3). Covers case studies from the fields of engineering technology and the natural and social sciences. Emphasizes the mathematics involved. Each student completes a term project which is the solution of a particular problem approved by the instructor. Prerequisite: MATH 344 with a grade point of 2.00 or better or departmental consent.

MATH 555. Differential Equations I (3). A study of first order equations including separation of variables and exact equations; second order equations including the general theory of initial value problems, constant coefficients, undetermined coefficients, variation of parameters, and special methods of solution using power series and the Laplace transform methods. A standard course in differential equation for students in the sciences and engineering. Credit not allowed in both MATH 550 and 555. Prerequisite: MATH 243 with a grade point of 2.00 or better or departmental consent.

MATH 580. Selected Topics in Mathematics (3). Topic chosen from topics not otherwise represented in the curriculum. May be repeated up to a maximum of 6 hours credit with departmental consent. Prerequisite: departmental consent.

MATH 615. Elementary Number Theory (3). Studies properties of the integers by elementary means. Prerequisite: MATH 344 with a grade point of 2.00 or better or departmental consent.

MATH 621. Elementary Geometry (3). Studies Euclidean geometry from an advanced point of view. Prerequisite: MATH 344 with a grade point of 2.00 or better or departmental consent.

MATH 640. Advanced Calculus II (3). A continuation of MATH 547. Prerequisites: MATH 511 and 547 with a grade point of 2.00 or better in each.

MATH 655. Differential Equations II (3). A continuation of MATH 555 (but with more emphasis on theoretical issues) that covers higher order differential equations, systems of first order equations (including the basics of linear algebra), some numerical methods, and stability and behavior of solutions for large times. Prerequisite: MATH 555 with a grade point of 2.00 or better or departmental consent.
MATH 657. Optimization Theory (3). Introduces selected topics in linear and nonlinear optimization. Develops the revised simplex method along with a careful treatment of duality. Then extends the theory to solve parametric, integer, and mixed integer linear programs. Prerequisite: MATH 511 with a grade point of 2.000 or better.

MATH 690. Introduction to Mathematical Logic (3). An axiomatic development of elementary mathematical logic through first-order logic culminating in theorems on completeness and consistency. Investigates connections with Boolean algebra, formal languages, and computer logic. Prerequisite: MATH 415 or 511 with a grade point of 2.000 or better or departmental consent.

MATH 713. Abstract Algebra I (3). Treats the standard basic topics of abstract algebra. Prerequisite: MATH 513 with a grade point of 2.000 or better or departmental consent.

MATH 714. Applied Mathematics (3). A study of mathematical techniques applicable to physics and other sciences. Instructor selects topics, such as power series, infinite products, asymptotic expansions, WKB method, contour integration and residue methods, integral transforms, Hilbert spaces, special functions, and integral equations. Prerequisite: MATH 555 or instructor's consent.

MATH 720. Modern Geometry (3). Examines the fundamental concepts of geometry. Prerequisite: MATH 513 with a grade point of 2.000 or better or departmental consent.

MATH 725. Topology I (3). Studies the results of point set and algebraic topology. Prerequisite: MATH 547 with a grade point of 2.000 or better or departmental consent.

MATH 743. Real Analysis I (3). Includes a study of the foundations of analysis and the fundamental results of the subject. Prerequisite: MATH 640 with a grade point of 2.000 or better or departmental consent.

MATH 745. Complex Analysis I (3). Studies the theory of analytic functions. Prerequisite: MATH 640 with a grade point of 2.000 or better or departmental consent.

MATH 750. Workshop (1–3). Topics appropriate for mathematics workshops that are not in current mathematics courses. May be repeated to a total of 6 hours credit with departmental consent. Prerequisite: departmental consent.

MATH 751. Numerical Linear Algebra (3). Includes analysis of direct and iterative methods for the solution of linear systems, linear least squares problems, eigenvalue problems, error analysis, and reduction by orthogonal transformations. Prerequisites: MATH 511, 547, and 551 with a grade point of 2.000 or better in each, or departmental consent.

MATH 753. Ordinary Differential Equations (3). Covers existence, uniqueness, stability, and other qualitative theories of ordinary differential equations. Prerequisite: MATH 545 or 547 with a grade point of 2.000 or better or departmental consent.

MATH 755. Partial Differential Equations I (3). Studies the existence and uniqueness theory for boundary value problems of partial differential equations of all types. Prerequisite: MATH 547 with a grade point of 2.000 or better or departmental consent.

MATH 757. Partial Differential Equations for Engineers (3). Includes Fourier series, the Fourier integral, boundary value problems for the partial differential equations of mathematical physics, Bessel and Legendre functions, and linear systems of ordinary differential equations. Prerequisite: MATH 555 with a grade point of 2.000 or better.

MATH 758. Complex and Vector Analysis for Engineers (3). A survey of some of the mathematical techniques needed in engineering including an introduction to vector analysis, line and surface integrals and complex analysis, contour integrals, and the method of residues. Not applicable toward a graduate degree in mathematics. Prerequisite: MATH 555 with a grade point of 2.000 or better.

Courses for Graduate Students Only

MATH 813. Abstract Algebra II (3). A continuation of MATH 713. Prerequisite: MATH 713 or equivalent.

MATH 825. Topology II (3). A continuation of MATH 725. Prerequisite: MATH 725 or equivalent.

MATH 828. Selected Topics in Topology (2–3). Repeatable with departmental consent. Prerequisite: departmental consent.

MATH 829. Selected Topics in Geometry (2–3). Repeatable with departmental consent. Prerequisite: departmental consent.

MATH 843. Real Analysis II (3). A continuation of MATH 743. Prerequisite: MATH 743 or equivalent.

MATH 845. Complex Analysis II (3). A continuation of MATH 745. Prerequisite: MATH 745 or equivalent.

MATH 848. Calculus of Variations (3). Includes Euler-Lagrange equations, variational methods, and applications to extremal problems in continuum mechanics. Prerequisite: MATH 547 or 757.

MATH 849. Selected Topics in Analysis (2–3). Repeatable with departmental consent. Prerequisite: departmental consent.


MATH 852. Numerical Analysis of Partial Differential Equations (3). Includes analysis of algorithms for the solution of initial value problems and boundary value problems for systems of PDEs with applications to fluid flow, structural mechanics, electromagnetic theory, and control theory. Prerequisite: MATH 751.

MATH 854. Tensor Analysis with Applications (3). After introducing tensor analysis, considers applications to continuum mechanics, structural analysis, and numerical grid generation. Prerequisite: MATH 545 or 757.


MATH 857. Selected Topics in Engineering Mathematics (3). Advanced topics in mathematics of interest to engineering students, including tensor analysis, calculus of variations and partial differential equations. Not applicable toward the MS in mathematics.

MATH 859. Selected Topics in Applied Mathematics (2–3). Repeatable with departmental consent.

MATH 880. Proseminar (1). Oral presentation of research in areas of interest to the students. Prerequisite: major standing.

MATH 881. Individual Reading (1–5). Repeatable to a maximum of 6 hours with departmental consent. Prerequisite: departmental consent.

MATH 885. Thesis (1–4). May be repeated to a maximum of 6 hours credit. Prerequisite: departmental consent.


MATH 952. Advanced Topics in Numerical Analysis (3). Advanced topics of current research interest in numerical analysis. Topics chosen at instructor's discretion. Possible areas of concentration are numerical methods in ordinary differential equations, partial differential equations, and linear algebra. Prerequisites: MATH 751, 851, and instructor's consent.

MATH 958 & 959. Selected Advanced Topics in Applied Mathematics (3 & 3). Topics of current research interest in applied mathematics. Repeatable for credit with departmental consent. Prerequisite: instructor's consent.

MATH 981. Advanced Independent Study in Applied Mathematics (1–3). Arranged individual directed study in an area of applied mathematics. Repeatable to a maximum of 6 hours. Prerequisites: must have passed the PhD qualifying exam and instructor's consent.

MATH 985. PhD Dissertation (1–9). Repeatable to a maximum of 24 hours. Graded S/U only. Prerequisite: must have passed the PhD preliminary exam.

Statistics (STAT)

Courses for Graduate/Undergraduate Credit Credit in courses numbered below 600 is not applicable toward the MS in mathematics.

STAT 570. Special Topics in Statistics (3). Covers topics of interest not otherwise available. Prerequisite: departmental consent.

STAT 571–572. Statistical Methods I and II (3–3). Includes probability models, points and interval estimates, statistical tests of hypotheses, correlation and regression analysis, introduction to non-parametric statistical techniques, least squares, analysis of variance, and topics in
STAT 762. Applied Stochastic Processes (3). Examines many of the advanced features of most commercial statistical packages. Students perform complete statistical analyses of real data sets. Prerequisites: STAT 763 and 764 or departmental consent.

STAT 775. Applied Statistical Methods I (3). Covers selected topics from time series analysis including basic characteristics of time series, autocorrelation, stationarity, spectral analysis, linear filtering, ARIMA models, Box-Jenkins forecasting and model identification, classification, and pattern recognition. Prerequisite: STAT 763 with a grade point of 2.000 or better or departmental consent.

STAT 776. Applied Statistical Methods II (3). Covers selected topics from multivariate analysis including statistical theory associated with the multivariate normal, Wishart and other related distributions, partial and multiple correlation, principal component analysis, factor analysis, classification and discriminant analysis, cluster analysis, James-Stein estimates, multivariate probability inequalities, majorization and Schur functions. Prerequisite: STAT 764 with a grade point of 2.000 or better or departmental consent.

Courses for Graduate Students Only

STAT 861–862. Theory of Probability I and II (3–3). The axiomatic foundations of probability theory emphasize the coverage of probability measures, distribution functions, characteristic functions, random variables, modes of convergence, the law of large numbers and central limit theorem, and conditioning and the Markov property. Prerequisites: MATH 743 and STAT 761 or 771.


STAT 872–873. Theory of Linear Models I and II (3–3). An introduction to the theory of linear models and analysis of variance. Includes multivariate normal distribution, distributions of quadratic forms, general linear models, general linear hypothesis, confidence regions, prediction and tolerance intervals, design models (1-factor and 2-factor), analysis of covariance, and components-of-variance models. Prerequisites: MATH 511 and STAT 761.

STAT 875. Design of Experiments (3). A study of basic concepts of experimental design which include completely randomized design, randomized block design, randomized model, estimation and tests, Latin square design, factorial experiments, confounding, split-plot designs, incomplete block designs, and intra- and interblock information. Prerequisite: STAT 572 or 772.

STAT 876. Nonparametric Methods (3). An introduction to the theory of nonparametric statistics. Includes order statistics; tests based on runs; tests of goodness of fit; rank-order statistics; one-, two-, and k-sample problems; linear rank statistics; measure of association for bivariate samples; and asymptotic efficiency. Prerequisite: STAT 772.

STAT 877. Multivariate Statistical Methods (3). Elementary theory and techniques of analyzing multidimensional data; covers Hotelling’s T2, multivariate analysis of variance, principal components analysis, linear discrimination analysis, canonical correlation analysis, and analysis of categorical data. Prerequisites: MATH 511 and STAT 772.

STAT 878. Special Topics (2–3). Repeatable with departmental consent. Prerequisite: departmental consent.

STAT 879. Individual Reading (1–5). Prerequisite: departmental consent.

STAT 884. Statistical Computing II (3). Teaches special graphics and numerical methods needed in the analysis of statistical data. Includes advanced simulation techniques, numerical methods for linear and nonlinear problems, analysis of missing data, smoothing and density estimation, projection-pursuit methods, and graphic techniques. Prerequisites: MATH 751 and STAT 772 with a grade point of 2.000 or better or departmental consent.

STAT 971 & 972. Selected Advanced Topics in Probability and Statistics (3 & 3). Topics of current research interest in probability and statistics. Repeatable for credit with departmental consent. Prerequisite: instructor's consent.

STAT 978. Advanced Independent Study in Probability and Statistics (1–3). Arranged individual directed study in an area of probability or statistics. Repeatable to a maximum of 6 hours. Prerequisites: must have passed the PhD qualifying exam and instructor's consent.

STAT 986. PhD Dissertation (1–9). Repeatable to a maximum of 24 hours. Graded J/U only. Prerequisite: must have passed the PhD preliminary exam.

Modern and Classical Languages and Literatures Graduate Faculty

Profsessors: Wilson Baldrige (chairperson), Gary H. Toops

Associate Professors: Eunice Myers (associate dean, Fairmount College), Brigitte Roussel

Assistant Professors: Maria Akarbova (graduate coordinator), Michael McGlynn, Marat Sanatullov, Kerry Wilks

French (FREN)

Although a complete graduate program is not currently available in French, the following courses may apply toward a master's degree if approved in advance of enrollment by the student's adviser, the chairperson of the department of modern and classical languages and literatures, and the dean of the Graduate School.

Courses for Graduate/Undergraduate Credit

Upper-division courses are given on a rotating basis. FREN 300 is a prerequisite for all upper-division literature and civilization courses, unless otherwise indicated.
FREN 505. Advanced French Phonetics (3). 2R; 1L. Cross-listed as LING 505A. Includes articulatory phonetics, phonemics, sound/symbol correspondences, dialec- tal and stylistic variations. Required for future French teach- ers. Prerequisite: any 200-level course or departmental consent.

FREN 515. Major Topics in French (1–4). Special studies in (a) language, (b) literature, (c) commercial French, (d) the language laboratory, (e) music, (f) composi- tion, (g) problems in teaching French, (h) civilization, (i) translation, (k) conversation, and (m) phonetics. Repeat- able for credit. Prerequisite: departmental consent.

FREN 520. Novel and Film (3). Analysis and discus- sion of celebrated French novels together with major film versions of the same. The status of the image in relation to the works' historical and cultural contexts is the focus. Prerequisite: FREN 300.

FREN 525. Advanced French Conversation (3). Designed to increase proficiency in spoken French. Assignments include oral reports, dialogs, and work in the language laboratory. Prerequisite: FREN 324 or departmental consent.

FREN 526. Advanced French Composition and Grammar (3). Emphasizes theme writing, original com-positions, and detailed study of modern French grammar. Prerequisite: FREN 324 or departmental consent.

FREN 540. French Literature in English Translation (3). Topic varies. May be used to satisfy the LAS literature requirement and may count toward a French major or minor if readings and papers are done in French.

FREN 541. French Literature of Africa and the Caribbean in Translation (3). A study of the concept of Negritude through the works of major contemporary African and Caribbean writers. No knowledge of a for- eign language is necessary. May be used to satisfy the LAS literature requirement and may count toward a French major or minor if readings and papers are done in French.

FREN 551. French Civilization: The Middle Ages to the Restoration (3). Emphasizes key aspects of the civil- ization of France as seen in its art, architecture, political structure, social evolution, and intellectual traditions. Interdisciplinary course complements studies in French language and literature. Classwork and required readings are in French. Prerequisite: FREN 300.

FREN 552. Contemporary French Civilization (3). Emphasizes the major events, themes, ideas, trends, and movements in French civilization since the Revolution. Interdisciplinary course complements French language and literature courses. Classwork and readings are in French. Prerequisite: FREN 300.

FREN 623. Seminar in French (3). Seminar in French literature, language, or civilization. Repeatable for credit. Prerequisite: FREN 300.

FREN 629. Medieval French Literature (3). Analysis and discussion of major French works from 900 to 1500, the literary movements to which they pertain, and the place of individual authors in the overall tradition. Prerequisite: FREN 300.

FREN 630. Renaissance French Literature (3). Analyzes and discusses major French works, 1500–1600. Prerequisite: FREN 300.

FREN 631. 17th Century French Literature (3). Prerequisite: FREN 300.

FREN 632. 18th Century French Literature (3). Prerequisite: FREN 300.

FREN 633. 19th Century French Literature (3). Prerequisite: FREN 300.

FREN 634. 20th Century French Literature: 1900–1945 (3). Analyzes and discusses major works of French fiction, poetry, and drama from the Belle Epoque through World War II. Prerequisite: FREN 300.

FREN 635. Introduction to Romance Linguistics (3). Cross-listed as LING 635 and SPAN 635. Provides a contrastive examination of the phonology, morphology, and syntax of the major contemporary Romance lan- guages (French, Spanish, Italian, Portuguese, Catalan, and Romanian). Introduces students to the sound and writing system and basic grammar of Latin and contrasts the phonological and grammatical systems of the contem- porary Romance languages (French and Spanish in particu- lar) with those of Latin. It compares specific features of the modern Romance languages synchronically (i.e., apart from Latin) as well. Students are advised to have a solid grounding in at least one Romance language (preferably French or Spanish) and a familiarity with at least one other (French, Spanish, Latin, Italian, or Portuguese). Prerequisite: departmental or instructor's consent.


FREN 726. French Composition and Stylistics (3). Offers background in rhetoric and stylistics as an approach to literary models, with a view to developing the creative use of style together with grammatical accuracy in writing. Practice in revision forms the basis of this course. Prerequisite: FREN 526 or departmental consent.

FREN 750. Workshop in French. (2–4). Repeatable for credit.

Courses for Graduate Students Only

FREN 815. Special Studies in French (3). Prerequisite: departmental consent. Repeatable for credit.

German (GERM)

Although a complete graduate program is not currently available in German, the following courses may apply toward a master's degree.

Courses for Graduate/Undergraduate Credit

GERM 524. Advanced German Conversation and Composition (3). Prerequisite: GERM 324 or instructor's consent.

GERM 650. Directed Studies in German (1–3). Enrollment in any of the areas listed takes place only upon consultation with the department and agreement with the instructor concerned: (a) Introduction to the Study of German Literature; (b) Survey I: From the Medieval Period Through the Age of Goethe; (c) Survey II: 19th Century to 1945; (d) Contemporary Literature, including the literatures of East and West Germany, 1949–1989; (e) Special Topics in Literature, repeatable once for credit; (f) Special Topics in Language, repeatable once for credit. Prerequisite: GERM 300 or instructor's consent.

Greek (Ancient Classical) (GREK)

Although a complete graduate program is not currently available in Greek, the following courses may apply toward a master's degree.

Courses for Graduate/Undergraduate Credit

GREK 515. Special Studies in Greek (1–4). Topic announced by instructor. Repeatable for credit. Prerequisite: GREK 224 or instructor's consent.

GREK 532. Advanced Greek (3). Thucydides. Prerequisite: GREK 531.

Latin (LATN)

Although a complete graduate program is not currently available in Latin, the following courses may apply toward a master's degree.

Courses for Graduate/Undergraduate Credit

LATN 224 or departmental consent is the prerequisite for all upper-division courses.


LATN 541. Roman Lyric Poetry (3). The lyric poems of Catullus and Horace emphasizing imagery, symbolism, structure, diction, and meter.

LATN 542. Virgil's Aeneid (3). Selected books of the Aeneid in the original and the rest in translation. Studies imagery, symbolism, structure, meter, and diction. Considers the place of the Aeneid in Augustan Rome and in the epic tradition.

LATN 543. Roman Drama (3). A study of Roman comedy and tragedy, their Greek background, and their influence on European literature. Includes selected plays of Plautus, Terence, and Seneca, some in the original and some in translation.

LATN 546. Advanced Latin (3). Directed reading of Latin. Reading may be combined with Latin prose composition at the option of the students. Repeatable for credit when content varies.

LATN 652. Cicero (3). The orations, letters, and essays of Cicero. Concentrates on Cicero as the master of Latin prose and as one of the most important political figures of the fall of the Roman Republic.

LATN 653. Lucretius and Epicureanism (3). Reading of Lucretius' De Rerum Natura and study of Epicureanism, the atomic theory, and Democritean materialism. Gives consideration to the place of Lucretius in Latin poetry.

Modern and Classical Languages and Literatures (MCLL)

Courses for Graduate/Undergraduate Credit

MCLL 651. Language and Culture (3). Cross-listed as ANTH 651 and LING 651. An introduction to the major themes in the interactions of language and society and language and culture, including ethnography of communication, linguistic relativity, and determinism; types of language contact; the linguistic repertoire; and cross-cultural discourse analysis. Content may vary with instructor. Prerequisite: 3 hours of linguistics, or MCLL 351, or 6 hours of anthropology.

MCLL 790Q. Special Topics in Music and Foreign Language (1–5). Cross-listed as MUSP 790Q (College of Fine Arts). Allows undergraduate and graduate students to take courses in the modern foreign languages together with individualized instruction in the translation and dictation of poetical texts set to music. Course may be used to satisfy the foreign language requirement of the Bachelor of Music in performance—vocal emphasis. Repeatable for credit. Prerequisite: departmental consent.

Russian (RUSS)

Although a complete graduate program is not currently available in Russian, the following courses may apply toward a master's degree.

Courses for Graduate/Undergraduate Credit

RUSS 505. Russian Phonetics (2). Cross-listed as LING 505B. Corrective pronunciation and auditory perception for non-native speakers of Russian. Includes articulatory phonetics, phonemics, and morphophonemics, as well as the study and production of intonation contours (intonatsioniye konstruktsii). Prerequisite: any 200-level course or instructor's consent.

RUSS 515. Special Studies in Russian (1–3). Advanced reading and translation in Russian social sciences, literature, and civilization. Repeatable for credit. Prerequisite: departmental consent.

RUSS 540. Russian Literature in English (3). Survey course in representative Russian literature (prose) of the 19th century, of the Soviet (socialist realism) or post-Soviet period, or of a particular author. The survey of 19th-century Russian literature typically includes major prose works of Pushkin, Lermontov, Gogol, Goncharov, Turgenev, minor prose works of Tolstoy and Dostoevsky, and the more popular plays of Chekhov. Emphasis on Russian and European history, historiography, and intellectual movements, as well as fundamental concepts of general literary analysis and criticism. No knowledge of Russian is required, although some is desirable. Prerequisite: departmental consent.

Spanish (SPAN)

Master of Arts and Areas of Specialization

The Department of Modern and Classical Languages and Literatures offers courses of study leading to the Master of Arts (MA) degree in Spanish. This degree program allows for specialization in Spanish language and literature and in Latin American literature.

Admission Requirements

Admission to the program requires a 3.00 GPA in Spanish. Non-native speakers must have completed 24 hours of undergraduate Spanish, 8 hours of which are junior-senior level. Native speakers must have completed 12 hours of Spanish at the junior-senior level.

Degree Requirements

The MA degree in Spanish requires the completion of 32 credit hours beyond the BA degree, including at least two seminars—SPAN 623, 831, or 832—that require research papers. Of these hours, 20 must be in courses numbered 700 or above.

Each program may include up to 9 hours of related fields and at least 23 hours of Spanish, including SPAN 526 and three of the following survey courses—531, 532, 620, 621—if their equivalents were not taken as undergraduate courses.

A candidate for a degree must pass SPAN 526 or an equivalent course with a B or better at either the undergraduate or graduate level.

Related fields typically include another foreign language; art; English, American, and foreign literatures; Latin American history; or geography. All related field courses must be approved by the chairperson of the department of modern and classical languages and literatures or the graduate coordinator.

Special recommendation is strongly made that all MA candidates in Spanish earn a minimum of 4 hours of transferable credit in a university located in a Spanish-speaking country.

Examinations

Before the MA degree in Spanish is granted, all candidates must pass written and oral comprehensive examinations over reading lists in three areas of specialization of their choice and prove by written examination a reading knowledge of a second foreign language.

Courses for Graduate/Undergraduate Credit

Upper-division courses are given on a rotating basis. SPAN 300 is a prerequisite for all upper-division literature and civilization courses, unless otherwise indicated.

SPAN 505. Spanish Phonetics (2). Cross-listed as LING 505C. Includes articulatory phonetics, phonemics, sound/symbol correspondences, diakinesial and stylistic variations. Required for future Spanish teachers. Prerequisite: any 200-level course or departmental consent.

SPAN 515. Major Topics in Spanish (1–4). Special studies in (a) language, (b) literary reports, (c) commercial Spanish, (d) the language laboratory, (e) music, (f) composition, (g) problems in teaching Spanish, (h) advanced conversation. Repeatable for credit. Prerequisite: departmental consent.

SPAN 520. Literature in Film (3). Spanish or Latin American literature and its representation in film. Prerequisite: departmental consent.

SPAN 525. Advanced Spanish Conversation (3). Provides the opportunity to further develop aural and oral proficiency through listening, vocabulary building, culturally appropriate communication strategies, skits, presentations, and pronunciation practice in an immersion environment. Prerequisite: SPAN 325 or departmental consent.

SPAN 526. Advanced Spanish Grammar and Composition (3). Prerequisite: SPAN 220 or departmental consent.

SPAN 531. Survey of Spanish Literature (3). Main currents of Spanish literature from 1700 to the present. Prerequisite: SPAN 300 or departmental consent.

SPAN 532. Survey of Spanish Literature (3). Spanish literature from the beginning to 1700. Prerequisite: SPAN 300 or departmental consent.

SPAN 534. Contemporary Spanish Theater (3). Prerequisite: SPAN 300 or departmental consent.

SPAN 536. Contemporary Spanish Novel (3). Prerequisite: SPAN 300 or departmental consent.

SPAN 540. Contemporary Spanish Literature in English Translation (3). Content may vary from semester to semester, including Spanish and/or Latin-American literature. No knowledge of a foreign language is necessary. May be used to satisfy the general education literature requirement and may count toward a Spanish major or minor if readings and papers are done in Spanish and prerequisite of SPAN 300 is met. Repeatable for credit.

SPAN 552. Business Spanish (3). Provides the opportunity to learn and practice commercial correspondence, business vocabulary, translation, and interpretation of business texts. Prerequisite: SPAN 526.

SPAN 557. Literary and Technical Translating in Spanish (3). Extensive translation of literary works and technical and legal documents from Spanish to English and English to Spanish. Prerequisite: SPAN 526 or departmental consent.

SPAN 621. Survey of Latin-American Literature (3). Main currents of Latin-American literature, 1800–present. Prerequisite: SPAN 300 or departmental consent.
SPAN 622. Special Studies in Spanish (1–4). Topic for study chosen with aid of instructor. Repeatable for credit. Prerequisite: instructor’s consent.


SPAN 625. Contemporary Latin-American Novel (3). Prerequisite: SPAN 300 or departmental consent.

SPAN 626. Spanish Civilization (3). Intensive study of Spanish culture, including historical and geographical factors in its development and its contributions to world civilization. Pre- or corequisite: SPAN 300 or departmental consent.

SPAN 627. Latin-American Civilization (3). Intensive study of Latin-American culture, including the historical and geographical factors of its development and its contributions to world civilization. Pre- or corequisite: SPAN 300 or departmental consent.

SPAN 631. Latin-American Short Story (3). Prerequisite: SPAN 300 or departmental consent.

SPAN 635. Introduction to Romance Linguistics (3). Cross-listed as FREN 635 and LING 635. Provides a contrastive examination of the phonology, morphology, and syntax of the major contemporary Romance languages (French, Spanish, Italian, Portuguese, Catalan, and Romanian). Introduces students to the sound and writing system and basic grammar of Latin and contrasts the phonological and grammatical systems of the contemporary Romance languages (French and Spanish in particular) with those of Latin. It compares specific features of the modern Romance languages synchronically (i.e., apart from Latin) as well. Students are advised to have a solid grounding in at least one Romance language (preferably French or Spanish) and a familiarity with at least one other (French, Spanish, Latin, Italian, or Portuguese). Prerequisite: departmental or instructor’s consent.

SPAN 640. Mexico: Its People and Culture (3). Study of the cultural development of Mexico, exploring the legacy of ancient cultures and the Spanish encounter in areas such as literature, the arts, music, and film industry. Prerequisite: SPAN 300 or departmental consent.

SPAN 650. South America: Its People and Cultures (3). Study of the cultural development of South America, exploring the legacy of Indian cultures and the Spanish encounter in areas such as literature, the arts, music, and the film industry. Prerequisite: SPAN 300 or departmental consent.

SPAN 726. Spanish Grammar and Stylistics (3). Intensive study of advanced grammar and stylistic usage. Prerequisite: SPAN 526.

SPAN 750. Workshop in Spanish. (2–4). Repeatable for credit.

Courses for Graduate Students Only

SPAN 801. Spanish Linguistics (3). Historical and structural study of the Spanish language.


SPAN 827. Latin American Civilization and Culture (3). Introduction to historical and cultural development in Latin America, exploring the legacy of the Spanish encounter/conquest. Emphasizes Spanish colonization. Prerequisite: graduate standing.

SPAN 831. Seminar in Spanish Literature (3). (a) Middle Ages, (b) Renaissance, (c) Golden Age theater, (d) Cervantes, (e) modern novel, (f) Generation of ’98, (g) Romanticism, (h) 20th century poetry, (i) criticism, (j) literature, (k) 20th century theatre, (l) contemporary Spanish novel, (m) picaroles novel, and (n) Spanish short story.

SPAN 832. Seminar in Latin-American Literature (3). (a) Colonial period, (b) contemporary novel, (c) short story, (d) poetry, (e) modernism, (f) essay, (g) theater, (h) Latin American literature, and (i) Latin American novel and film.

Philosophy (PHIL)

Graduate Faculty

Professors: David Soles, Deborah H. Soles, Robert Fleppa

Associate Professors: Jeffrey Hershfield, A.J. Mandt, Daniel Russell, William Vanderburgh

Assistant Professors: Xiufen Lu, Day Radebaugh

Although there is no graduate degree in philosophy, the following courses are available for graduate credit

Courses for Graduate/Undergraduate Credit

PHIL 501. Philosophy of Language (3). Examines the relationships between philosophy and language. Focuses on questions such as: What is the relation between language and thought? Language and the world? What can the study of language contribute to the resolution of philosophical problems? Prerequisite: one 300-level or higher course in philosophy.

PHIL 510. Philosophy of History (3). A philosophical examination of the meta-level issues that arise in the discipline and practice of history. Issues investigated include: What is history? What is the proper form of explanation in history? How are causal claims in history to be understood? Is it possible to achieve objectivity in historical explanations? What criteria should be employed in evaluating historical explanations? What are the moral obligations which should guide historical research and presentation? Prerequisite: instructor’s consent.

PHIL 519. Empiricism (3). A study of the philosophical views that emphasize sensory experience rather than reasoning as a source of knowledge with particular attention to the philosophies of Hobbes, Locke, Berkeley, Hume, and Mill.

PHIL 525. Evidential Reasoning (3). Explores philosophical issues related to reasoning about evidence. Topics may include: induction, confirmation, falsification, the under-determination of theories by evidence, theories of probability, and scientific method. Examines some case studies of reasoning about evidence in, for example, poker, medicine, risk analysis, forensic sciences, and the law.

PHIL 540. Theory of Knowledge (3). A critical examination of the nature of knowledge and of the philosophical problems concerning skepticism, knowledge of the self, material objects, other minds, the past, present, and future; universals, and necessary truths. Includes selections from both historical and recent writings. Prerequisite: one course in philosophy.

PHIL 546. Rationalism (3). A study of the philosophical views that emphasize reasoning rather than sensory experience as the source of knowledge with particular attention to the philosophies of Descartes, Spinoza, and Leibniz.

PHIL 549. Topics in Ancient Philosophy (3). Explores one decisive issue in philosophy from the time of Thales through the Stoics. The examination of an issue may confine itself to one period within the total span of ancient philosophy or it may trace the issue throughout the span, indicating its contemporary treatment. Some issues treated are: the nature of what is, the concept of the sacred, the meaning of truth, the relation of invariance and process, the existence of universal standards of thought and conduct, the problem of knowledge, skepticism, the nature of language, and the character of philosophical inquiry.

PHIL 550. Metaphysics (3). An exploration of some basic topics in the theory of reality. Includes such notions as space, time, substance, causality, particulars, universals, appearance, essence, and being. Prerequisite: one course in philosophy.

PHIL 555. Philosophy of the Social Sciences (3). Studies such topics as the relation of social sciences with natural sciences and philosophy, methodological problems peculiar to social sciences, the nature of sound explanation concepts, and constructs and the roles of mathematics and formal theories in social sciences.

PHIL 565. Topics in Asian Philosophy (3). An in-depth examination of selected topics in Asian philosophy. The topics covered in any particular semester may vary. Representative topics include movements such as Confucianism, Taoism, or Buddhism. Prerequisite: one philosophy course.

PHIL 585. Studies in a Major Philosopher (3). A concentrated study of the thought of one major philosopher announced by the instructor when the course is scheduled. Repeatable for credit. Prerequisite: instructor’s consent.

PHIL 590. Special Studies (3). Topic for study announced by instructor. Repeatable for credit. Prerequisite: instructor’s consent.

PHIL 699. Directed Reading (2–3). For the student interested in doing independent study and research in a special area of interest. Repeatable for credit. Prerequisite: departmental consent.

Courses for Graduate Students Only

PHIL 850. Directed Reading (3). For the graduate student desiring independent study and research in an area of special interest. May be repeated for credit. Prerequisite: departmental consent.

PHIL 900. Ethics and Psychology (3). Cross listed as PSY 900. An in-depth analysis of moral issues that arise in the profession of psychology. Provides a detailed
familiarization with current moral controversies and develops ethical reasoning skills that will enable one to address new issues as they arise. Representative topics include: informed and voluntary consent, rights of human research subjects, privacy and confidentiality, assessment, conflicting obligations, ownership of research results, multiple relationships in teaching, research and practice, conflicts between therapeutic and forensic roles, objectivity in research, the nature and boundaries of teaching psychology, etc.

Physics (PHYS)
Graduate Faculty

Distinguished Professor: James C. Ho (WSU Trustees Distinguished Professor of Physics)
Professors: Elizabeth C. Behrman, Hussein Hamdeh, Nickolas Solomey (chairperson)
Associate Professors: Jason Ferguson, Syed M. Taher

Although applications are not being accepted for the MS program pending restructuring of the graduate program in physics, the following courses are available for graduate credit.

Courses for Graduate/Undergraduate Credit

PHYS 501. Special Studies in Physics for Educators (1–3). 3L. A series of courses covering basic physical concepts which provide physical science background for teachers. Repeatable for a maximum of 5 hours. Prerequisite: inservice or preservice teacher.

PHYS 502. Science Investigations: Physics (5). Introductory course for prospective teachers. Basic physics concepts in mechanics, heat, and electricity and magnetism developed through laboratory investigations. Emphasizes science process skills and the nature of the scientific endeavor. Prerequisite: MATH 111 or equivalent; inservice or preservice teacher.

PHYS 516. Advanced Physics Laboratory (2). 4L. Experiments in classical and modern physics to stress scientific methods and experimental techniques. The experiments are open-ended projects requiring individual study. Repeatable up to a maximum of 8 credit hours. Corequisite: PHYS 551.

PHYS 517. Electronics Laboratory (2). 1R; 3L. Experiments in electronics that treat some of the applications of electronics in scientific physics research. Experiments cover the uses of transistors, op-amps, integrated and digital circuits. Prerequisite: PHYS 551.

PHYS 551. Topics in Modern Physics (3). An introduction to selected areas of modern physics emphasizing the features of atomic, nuclear, and solid state physics that require modifications of classical physics for their explanation. Prerequisite: PHYS 214, 303 or 314 or departmental consent. Corequisite: MATH 344.

PHYS 555. Modern Optics (3). Geometrical and physical optics, coherence theory, and Fourier optics. Additional topics may include radiation, scattering, optical properties of solids, and optical data processing. Prerequisites: PHYS 214, 303 or 314 and MATH 344.

PHYS 595. Astrophysics (3). Covers the formation, life, and death of stars. Topics include: HR-diagrams, atomic and molecular spectra, radiation and convective transfer, the structure and spectra of stellar atmospheres, and stellar evolution. Prerequisite: PHYS 551.

PHYS 600. Individual Readings in Physics (1–3). Repeatable but total credit may not exceed 6 hours for physics majors. Prerequisite: departmental consent.

PHYS 601. Individual Readings in Astrophysics (1–3). Studies several topics in astronomy and astrophysics in depth. Lectures, independent readings, and student projects may be assigned. May be repeated up to 6 hours. Prerequisite: instructor's consent.

PHYS 616. Computational Physics Laboratory (2). 1R; 2L. Provides a working knowledge of computational techniques with applications in both theoretical and experimental physics, including an introduction to the FORTRAN and C++ languages as used in physics. Corequisite: MATH 555.

PHYS 621. Analytical Mechanics (3). Motion of a particle or system of particles in one or several dimensions, central forces, rotating coordinate systems, the harmonic oscillator and the Lagrangian and Hamiltonian formulation of mechanics. Prerequisites: PHYS 214, 303 or 314, and MATH 344 with grades of C or better.

PHYS 631. Electricity and Magnetism (3). Electric and magnetic field theory, direct and alternating currents and Maxwell's electromagnetic wave theory. Prerequisite: PHYS 214, 303 or 314, and MATH 344 with grades of C or better.

PHYS 641. Thermophysics (3). The laws of thermodynamics, distribution functions, Boltzmann equation, transport phenomena, fluctuations, and an introduction to statistical mechanics. Prerequisites: PHYS 214, 303 or 314, and MATH 344.

PHYS 651. Quantum Mechanics I (3). Introduction to quantum mechanics, the Schrodinger equation, elementary perturbation theory, and the hydrogen atom. Prerequisite: PHYS 551.

PHYS 652. Quantum Mechanics II (3). A continuation of PHYS 651 and covers time dependent perturbation theory, WKB, scattering, Bell's theorem, quantum reality, applications of quantum mechanics, and nanotechnology. Prerequisite: PHYS 651.

PHYS 661. Introduction to Atomic Physics (3). Quantum mechanics is the basis of all our physical understanding of atomic and molecular spectra. This course uses quantum mechanics to understand the nature and formation of the spectra of one, two and many-electron atoms. A discussion of atomic collisions is included. Corequisite: PHYS 651.

PHYS 675. Nuclear and Particle Physics (3). Theories of nuclear and particle physics, including experimental techniques and important features of current data. Summary of mesons, baryons, and leptons, and their electromagnetic, strong and weak nuclear force interactions. Phenomenological descriptions of nuclear and high-energy scattering and particle production leading to the quark theory of matter and other new exotic particles. Prerequisite: PHYS 551.

PHYS 681. Solid State Physics (3). A one-semester introduction to solid state physics, which explores and explains—in terms of the microscopic processes that produce them—the thermal, mechanical, and electronic properties of solids. Discusses practical applications and interdisciplinary material. Prerequisite: PHYS 551.

PHYS 730. Principles of Computer Modeling (2) 1R; 2L. Essential elements, principles, and strategies of forward and inverse numerical computer modeling. Formulation of a qualitative problem (parameterization), model design, implementation, and interpretation of model results. Working knowledge of computational techniques with examples in physics, geology, chemistry, and environmental sciences. Prerequisites: PHYS 616 or EEPS 701, plus knowledge of a programming language or numerical or symbolic mathematics package, or instructor's consent.

PHYS 761. Environmental Physics (3). The application of physics to the environment, including the production and use of energy, the transport of pollutants, and the study of noise. Topics include basic thermodynamics with applications to fossil fuels, hydroelectric, wind, geothermal, and solar energies, plus effects on global warming, pollution, and climate. Prerequisites: PHYS 303, or 313–314 and MATH 242, or EEPS 721, or instructor's consent.

PHYS 795. Earth and Space Physics (3). Cross-listed as GEOL 795. An introduction to the geosciences and astrophysics of the solar system. Topics include the surface, interior and atmospheres of the planets with a comparative planetology approach, and the sun-planet system including solar physics and the effect of the sun on the earth's environment and geologic history. Prerequisites: PHYS 303, or 313–314, and MATH 242, or EEPS 721, or instructor's consent.

Courses for Graduate Students Only

PHYS 800. Individual Readings (1–3). Repeatable for credit up to 3 hours. Prerequisites: 30 hours of physics and departmental consent.

PHYS 801. Selected Topics in Physics (2–3). Repeatable for credit up to 6 hours. Prerequisite: departmental consent.

PHYS 807. Seminar (1). Review of current periodicals; reports on student and faculty research. Repeatable for credit up to 2 hours. Prerequisite: 20 hours of physics.

PHYS 809. Research (1–3). Repeatable for credit up to 6 hours.

PHYS 811. Quantum Mechanics (3). The Schrödinger and Heisenberg formulations of quantum mechanics. Applications include rectangular potentials, central forces, and the harmonic oscillator. Also includes spin, time independent and time dependent perturbation theory. Prerequisites: PHYS 621 and 651 or departmental consent and MATH 555.

PHYS 821. Classical Mechanics (3). The Lagrangian, Hamiltonian, and Hamilton-Jacobi methods of mechanics and an introduction to variational calculus. Applications selected from central forces, rigid bodies, relativity, small oscillations, and continuous media. Prerequisites: PHYS 621 and MATH 555.
PHYS 831. Classical Electricity and Magnetism (3). Maxwell’s equations with application to static electricity and magnetism. Also may include electromagnetic fields, vector potentials, Greens functions, relativity, optics, and magnetohydrodynamics. Prerequisites: PHYS 631 and MATH 555.

PHYS 871. Statistical Mechanics (3). An introduction to the basic concepts and methods of statistical mechanics with applications to simple physical systems. Prerequisites: MATH 555 and PHYS 621.

PHYS 881. Solid State Physics (3). A second course in solid state physics for students who have had an introduction to the subject. Transport, dielectric and optical properties, magnetic properties, superconductivity, and applications to semi-conductor devices. Prerequisites: MATH 555, PHYS 651 and 681, or departmental consent.

Political Science (POLS) Graduate Faculty

Associate Professors: Carolyn Shaw (chairperson) Dinorah Azpiru

Although applications are not being accepted for the graduate program in political science, the following courses are available for graduate credit.

Courses for Graduate/Undergraduate Credit

POLS 524. Politics of Modern China (3). Studies China’s political system since 1949 in terms of non-Western goals and ideas of social organization. Uses themes of political integration and political development to minimize distortion or cultural bias. Encompasses the roots of the political system, the system as it is now, and the goals China is striving to realize. Some assessment about the future development of communism in China. Includes Chinese communism and the ideological heritage, political culture, political leadership, leadership succession, political participation, the Chinese Communist Party, political communications and socialization, legal developments, policy choices, and major events, such as the Hundred Flowers Campaign, Great Leap Forward, and the Proletarian Cultural Revolution.

POLS 533. U.S. Foreign Policy (3). Explores the dynamic decision-making process in the development of U.S. foreign policy. Examines the variety of actors involved, including the military, the State Department, the President, and others. Bilateral as well as global policy issues are examined.

POLS 534. Comparative Foreign Policy (3). Examines the foreign policies and the decision-making structures and processes of various countries.

POLS 547. Contemporary Political Theory (3). Introduces the radically new ideas that emerged in the last century as a result of Darwin’s theory of evolution, the doctrine of historicism, and the growth of modern science and explores their impact upon political thought. Although the multiplicity of philosophies makes generalization difficult, most of them draw strength from common sources. Studies philosophers such as Hans Kelsen, William Barrett, Friedrich Nietzsche, and John Dewey. Covers the importance of these new philosophies upon political structures and issues.

POLS 551. Public Law (3). An analysis of the role of appellate courts—especially of the U.S. Supreme Court—in the American political system. Emphasizes judicial review of state and federal legislation, the separation of powers, federalism, the taxing power, and the commerce clause.

POLS 552. Civil Liberties (3). An analysis of the role of the appellate courts—especially of the U.S. Supreme Court—in the American political system. Emphasizes the guarantees of the Bill of Rights and the 14th Amendment.

POLS 570. International Political Economy (3). Cross-listed as ECON 570. Examination of policy decisions regarding exchanges of trade, money, and labor that span national boundaries. Studies the interaction of politics and economics at the international level, as well as the modern history of the global economy. Economics often studies the material benefits and costs of different policies. Political science asks why these policies exist in the first place with a focus on who gets the benefits, who pays the costs, and how decisions about allocating benefits and costs are made.


POLS 600. Senior Seminar (3). Required of all political science majors. Includes segments on each of the four major fields of the discipline: American politics, comparative politics, international relations, and political theory, so students can integrate their prior learning experiences within the discipline. Prerequisites: senior status, 18 hours of POLS courses.

POLS 700. Advanced Directed Readings (3). Repeatable for credit. Prerequisite: departmental consent.

POLS 710. Public Sector Organizational Theory and Behavior (3). Cross-listed as PADM 710. Review of the scope of the field of public administration including a survey of key concepts and schools of thought underlying the field and identification of issues shaping the future development of the field.

POLS 725. Public Management of Human Resources (3). Cross-listed as PADM 725. Surveys the major areas of management of human resources in the public sector. Includes hiring, training, evaluation, and pay promotion policies. Emphasizes the laws governing public personnel management and the unique merit, equal employment opportunity, productivity, unionization, and collective bargaining problems found in the public sector.

POLS 750. Workshop (2–4). Prerequisite: instructor’s consent.

Courses for Graduate Students Only

POLS 865. State and Local Government Finance (3). Cross-listed as ECON 865 and PADM 865. An analysis of state and local government expenditure and revenue systems with an introduction to state and local financial administration. Prerequisite: PADM 765 or instructor’s consent.

POLS 873. Seminar Paper Option (3). Requires students to extensively revise a seminar paper they wrote within their area of emphasis. Paper is written under the direction of a faculty member and orally defended before a committee of three or more faculty, including a chairperson. Prerequisite: departmental approval.

POLS 874. Internship (3–6). An intensive applied learning experience supervised by a university department or committee. To receive credit, a student must secure approval of a written report from his or her own department. S/U grade only. Prerequisite: departmental consent.

POLS 875. Research Design (3). Requires the development of a research design for the thesis. The design must be submitted to a departmental committee for evaluation and approval. S/U grade only. Prerequisite: departmental consent.


Psychology (PSY) Graduate Faculty

Distinguished Professor: James J. Snyder (Katherine and Edith Erker Distinguished Professor of Psychology)

Professors: Charles A. Burdalsal, Jr. (chairperson), Alex Chaparro (human factors coordinator), Peter A. Cohen (dean, College of Health Professions), Darwin Dorr (clinical coordinator), Rhonda K. Lewis-Moss (community coordinator), Gregory J. Meissen, Louis J. Medvene, Robert D. Zettle (graduate coordinator)

Associate Professors: Barbara Chaparro, Donald W. Nance, Paul D. Ackerman, Edgar C. Merkle, Evan M. Palmer, Victoria Shaffer

Degrees Offered

The Psychology Department offers courses of study leading to the Doctor of Philosophy degree. Students may complete requirements for study in human factors psychology, community psychology, or clinical psychology.

Admission Requirements

Prerequisites: Applicants are not required to have an undergraduate degree in psychology, but must have completed courses in general psychology, psychological statistics, experimental psychology, and history/systems of psychology.

Deadlines: Application for admission should be filed with the dean of the Graduate School and the psychology department by January 15, for enrollment the following fall. Students applying after the deadlines may be considered if any openings in the programs remain. Applicants are informed of admission decisions around April 1 of each year.

Materials: In addition to the application forms (the Graduate School and the psychology department have different forms), the following are required: four letters of reference from people acquainted with the applicant's academic
background and potential; a brief autobiographical statement describing particular interests, experiences, and goals related to academic and professional work in psychology; and scores (verbal and quantitative) on the Graduate Record Exam (GRE).

Applicants are evaluated with respect to their undergraduate grade point average; stated career goals; amount, type, and scope of undergraduate preparation; reference letters; and GRE scores. 

**Degree Requirements**

**Required of All Students**

**Foundation Courses:**
- PSY 904 Biological and Philosophical Foundations of Psychology
- PSY 905 Cognitive/Learning Foundations of Behavior
- PSY 906 Assessment of Personality and Individual Differences
- PSY 907 Social and Developmental Foundations of Behavior

**Methods Courses:**
- PSY 902 Advanced Research Methods I
- PSY 903 Advanced Research Methods II

**Teaching and Ethics:**
- PSY 911 Teaching of Psych: Principles, Practices & Ethics (2 hrs)
- PSY 912 Teaching of Psych: Principles, Practices & Ethics (1 hr)

(Note: a grade of B or better must be earned in each of the foundation and methods courses. Students may retake these courses once. Failure to meet this requirement may lead to dismissal from the program.)

**Second Year Project:** All students must complete a predoctoral research program resulting in a document similar to a manuscript ready for journal submission. The student must enroll in PSY 901 each semester (excluding summers) until the project is completed, taking one hour during the first semester and three hours each semester following.

**Post Second Year Project Research:** After completion of the 2nd year project requirement, all students enroll in PSY 909 each semester (3 hours for human factors and community students, 1–3 hours for clinical students) until the successful completion of qualifying exams.

All students must have completed a minimum of 10 hours of PSY 901 and/or PSY 909. Note: Neither PSY 901 nor PSY 909 may be used for electives.

**Qualifying Examination:** Students take a qualifying examination upon completion of all foundation and method courses and most program courses. On passing this examination, students can be admitted to doctoral candidacy.

**Dissertation:** All students seeking the PhD are required to complete a dissertation. The dissertation ordinarily is a major research project. A formal written proposal must be approved by the student's dissertation committee prior to beginning the project. A student must be enrolled in PSY 908 (Doctoral Dissertation) any time a student is working on his or her dissertation (including summers). A minimum of 12 hours of PSY 908 must be earned. In addition to regular course examinations, all students must pass an oral examination based on their dissertation.

**Additional Program Requirements**

**Human Factors**

**Required Courses:**
- PSY 920 Psychological Principles of Human Factors
- PSY 921 Seminar in Human Factors
- PSY 922 Seminar in Software Psychology
- PSY 925 Seminar in Perception
- PSY 991 Judgment & Decision Making

**Electives:** Sufficient electives to total (all courses) 90 credit hours, 12 of which must be taken outside the human factors program.

**Calculus Track:** HFES accreditation requires that human factors students demonstrate a competency in calculus before admission to candidacy. This requirement may be satisfied by (a) satisfactorily completing a college-level calculus course; (b) demonstrating proficiency on an exam; or (c) providing other evidence of such skills.

**Internship:** Students must complete a research internship of 3 hours per semester over a period of two semesters for a total of 6 hours. It is the student's responsibility to develop his or her internship setting.

**Community**

**Required Courses:**
- PSY 940 Seminar in Community-Clinical Psychology
- PSY 941 Applied Research Methods in Community Settings
- PSY 942 Seminar in Community and Organizational Intervention
- PSY 943 Seminar in Prevention
- PSY 945 Seminar in Cultural Diversity

**Practicum:** Community students are required to take a minimum of 9 hours of Practicum in Community Psychology, PSY 944.

**Electives:** Sufficient electives to total 90 hours.

**Clinical**

**Required Courses:**
- PSY 940 Seminar in Community-Clinical Psychology
- PSY 945 Seminar in Cultural Diversity

**Electives:** Sufficient electives to total 102 credit hours.

**Internship:** Prior to graduation but after admission to candidacy, all clinical students must complete a 12-month internship. During the internship, students must complete a total of 3 hours of PSY 977, Internship in Clinical Psychology.

**Time Limits**

Students should be aware that the Graduate School requires completion of the degree no later than 9 years after admission. The psychology department expects all degree-bound students to make satisfactory progress toward the completion of their degree program.

**Courses for Graduate/Undergraduate Credit**

**PSY 502. Comparative Psychology (3).** Develops a unified theoretical perspective about the origins of behavior of all animals. Focuses on the evolution and development of behavior. Field trips supplement lectures. Prerequisite: one course from Group 1.

**PSY 506. Psychology of Helping Relationships (3).** Cross-listed as NURS 567 and SOC 506. Introduces
students to a psychological perspective on helping relationships that will be useful in both practice and research. Topics covered include the definition of relationship, and identification of the ways in which the roles of helper and help seeker can be structured to maximize effectiveness e.g., power, distance, similarity, and reciproc- ity. Relationships of interest include: counseling and psychotherapy, nurse and doctoring, family caregiving, mentoring, self-help, mutual aid, and volunteering. The emerging topic of “relationship-centered care models” in the education of health care professionals is discussed. Prerequisite: 6 hours in psychology including PSY 111 or instructor’s consent.

PSY 508. Psychology Tutorial (3). Selected topics in psychology. Repeatable for a maximum of 6 hours credit. Instructor’s consent may be required. Check Schedule of Courses. Prerequisite: PSY 111.

PSY 514. Psychology of Health and Illness (3). A survey of the relationships between psychology/behavior and physical health and illness. Includes stress and coping, health habits, symptom perception, health care provider-client relationships, hospitalization, and prevention. May include a self-study of lifestyle and behavior in relation to health and illness. Prerequisite: PSY 111.


PSY 534. Psychology of Women (3). Cross-listed as WOMS 534. Psychological assumptions, research, and theories of the roles, behavior, and potential of women in contemporary society. Prerequisite: PSY 111.

PSY 536. Behavior Modification (3). A study of the basic assumptions, principles, and issues of behavioral approach to helping persons with psychological problems. Includes demonstration and individualized practice in general helping skills as well as individual projects in applying these skills. Prerequisites: PSY 111 and instructor’s consent.


PSY 546. Aerospace Psychology (3). Exploration of the many roles of scientific psychology in aviation and aerospace science. Surveys the research and literature in areas such as psychophysiological aspects of flight, environmental effects on human performance in aviation, aircrew skill requirements and training, pilot workload, cockpit control and display systems, and aviation safety. Prerequisite: 15 hours of psychology or instructor’s consent.

PSY 556. Introduction to Clinical Psychology (3). A survey of current ethical, conceptual, and research issues involved in the assessment and treatment of psychopathology. Reviews contemporary psychotherapies emphasizing the relative efficacy of each and the therapeutic mechanisms through which they initiate behavioral change. Prerequisite: PSY 324.

PSY 566. Perspectives on Self-Help Groups (3). Cross-listed as NURS 566 and SCWK 566. Provides an interactive format that constitutes a community resource for health and human service professionals and promotes an interdisciplinary understanding of the nature and diversity of self-help groups for persons with virtually any health problem or personal issue. Reviews contemporary theory and research, explaining the attractiveness and effectiveness of self-help groups. Panels of support group members share their experience with self-help groups on such topics as addiction, cancer and other ill- nesses, eating disorders, bereavement, mental illness, and parenting.

PSY 568. Computer Applications to the Behavioral Sciences (3). 2R; 2L. Introduces computer applications to the behavioral sciences including 1) techniques of analyzing experimental data, 2) statistical applications, 3) interactive computing, 4) “canned” statistical programs, 5) word processing, and 6) other current computer applications. Prerequisites: 9 hours in the social sciences.

PSY 608. Special Investigation (1–3). Upon consultation with instructor, advanced students with adequate preparation may undertake original research or directed readings in psychological problems. Repeatable for a maximum of 6 credit hours. Requires consultation with, and approval by, appropriate adviser prior to registration. Prerequisites: 9 hours in psychology and instructor’s consent.

PSY 750. Psychology Workshop (1–3). Specialized instruction, using various formats in selected topics and areas of psychology. Graded S/U.

Courses for Graduate Students Only

PSY 900. Ethics and Psychology (3). Cross-listed as PHIL 900. An in-depth analysis of moral issues that arise in the profession of psychology. Provides a detailed familiarization with current moral controversies and develops ethical reasoning skills that will enable one to address new issues as they arise. Representative topics include: informed and voluntary consent, rights of human research subjects, privacy and confidentiality, assessment, conflicting obligations, ownership of research results, multiple relationships in teaching, research and practice, conflicts between therapeutic and forensic roles, objectivity in research, the nature and boundaries of teaching psychology.


PSY 902. Advanced Research Methods I (4). 3R; 3L. Part one of a two-course sequence aimed at advanced treatment of statistical and research design issues. Statistical methods included are analysis of variance, analysis of covariance, multiple comparisons, and multiple regression. Design issues include research planning, validity, quasi vs. experimental designs, prediction vs. explanation, and modeling. The associated lab provides basic computer skills for access to the mainframe and some basic training for Excel and SPSS for Windows. Prerequisite: instructor’s consent.

PSY 903. Advanced Research Methods II (4). 3R; 3L. Continuation of PSY 902. Statistical techniques emphasized are a continuation of multiple regression, structural analyses and analyses using AMOS, research design, canonical corre- lation, and discriminant analysis. Includes advanced design issues. The associated lab provides additional computer skills for Excel, and SPSS for Windows. Prerequisites: PSY 902 and instructor’s consent.

PSY 904. Biological and Philosophical Foundations of Psychology (3). Develops the idea that psychology is a biosocial science. Examines the philosophical foundations of science itself before exploring the biological foundations and contextual nature of psychological science. Readings cover biological factors as they pertain to psychology: evolution, genetics, maturation, functional neuroanatomy, physiology. Includes critical reviews of genetic determinism, neural localization, and hemispheric specialization. Prerequisite: instructor’s consent.

PSY 905. Cognitive/Learning Foundations of Behavior (3). Focuses on how human beings learn, maintain, and modify behavior, and how cognitive knowledge is acquired, maintained, represented, and used. Serves as an integrated resource of the main issues and the theoretical questions investigated in the psychology of learning and cognition. A basic understanding of classical and instrumental conditioning, and the cognitive processes of memory, language, speech, thought, decision making, and problem solving are provided. Prerequisite: instructor’s consent.

PSY 906. Assessment of Personality and Individual Differences (3). Reviews psychometric principles underlying assessment of individual differences in cognition and personality. Major approaches to assessment of normal personality variables are examined. Students self administer several personality instruments and assess a client under supervision. Prerequisite: instructor’s consent.

PSY 907. Social and Developmental Foundations of Behavior (3). Examines basic assumptions, theories and methods in social and developmental psychology. Describes and analyzes research concerning the function- al significance of social relationships for development and the embeddedness of behavior in social, ecological and cultural contexts, focusing on a number of substantive issues such as person perception and social cognition, affiliation and attachment, socialization and interpersonal interaction, social support and social roles and contexts over the life span. Considers the applications of theories of attribution, attitude change, group functioning and attachment to current social problems. Prerequisite: instructor’s consent.

PSY 908. Doctoral Dissertation (1–3). Repeatable for credit. Graded S/U only. Prerequisite: admission to candidacy and instructor’s consent.

PSY 909. Preproposal Research (1–3). A research course for students who have completed the second year but have not yet completed examinations. Focuses on the first steps in developing a dissertation pro- posal. May be taken an unlimited number of times. Graded S/U.

PSY 911. Teaching of Psychology: Principles, Practices & Ethics (2-1). Prepares doctoral students in psychology to assume undergraduate teaching duties. Pre- sents basic pedagogical tools as well as university and
departmental policies and procedures. Students learn about opportunities to incorporate technology in the classroom and have several occasions to observe and practice teaching. Introduces students to important ethical issues that confront teachers of psychology and provides strategies for handling ethical dilemmas. Psychology graduate students are required to complete the 2-hour/1-hour fall/spring sequence or have equivalent experience before teaching. Grade: S/U.

PSY 920. Psychological Principles of Human Factors (3). Focuses on the interaction of people with machines and technology in a variety of environments. Provides depth to the topics surveyed in PSY 405 and serves as a means of integrating cognitive, biological, and perceptual psychology in applied settings. Prerequisites: completion of undergraduate course in cognitive psychology or PSY 905; and instructor's consent after interview for doctoral students from other disciplines.

PSY 921. Seminar in Human Factors (3). Focuses on a sample of contemporary human factors problems through review of current literature and theory. Content changes as new problems attain prominence internationally, but a typical sample might be human factors in the aging population; human factors in airport security and baggage marking; and human factors in third-world industrialization. Prerequisites: completion of 9 hours of foundations of psychology doctoral courses; for doctoral students from other disciplines, instructor's consent after an interview.

PSY 922. Seminar in Software Psychology (3). Intensive study of principles and methods of engineering psychology (human factors) applied to the design and evaluation of computer software. Includes research methods, programming as human performance, programming style, software quality evaluation, organizing the programming team, interactive interface issues, and the design of interactive computer systems. Prerequisite: instructor's consent.

PSY 923. Seminar in Motor and Sensory Processes (3). Focuses on the perceptual control of action. Reviews how the sensory systems operate with emphasis on vision. Covers anatomy and physiology of the motor system. Selected examples on how these concepts relate to human factors psychology. Prerequisite: instructor's consent.

PSY 925. Seminar in Perception (3). Intensive study in theory and research in perceptual processes. Prerequisites: PSY 409, or equivalent, and instructor's consent.

PSY 926. Internship in Human Factors Psychology (1–3). Repeatable up to 6 hours. A planned placement experience in an off-campus setting, giving the doctoral human factors psychology student an opportunity to apply the principles of human factors psychology. Prerequisite: advisor's consent.

PSY 940. Seminar in Community-Clinical Psychology (3). Introduces basic historical, conceptual, research, methodological, and ethical issues in community-clinical psychology. Examines the responsibilities and roles of psychologists in the promotion of human functioning. Reviews models and determinants of human behavior from individual, developmental, and ecological/contextual perspectives. Details the reciprocal relationship between research and practical applications of psychological knowledge and the application of that knowledge to human psychosocial problems. Prerequisite: instructor's consent.

PSY 941. Applied Research Methods in Community Settings (3). An examination of research methods which are used in community settings to develop and evaluate programs. Regarding program development, there is discussion of different data collection strategies used to assess community needs. Explores a variety of topics related to program evaluation including research design issues, developing criteria of merit, and the politicization of program evaluation. Prerequisite: instructor's consent.

PSY 942. Seminar in Community and Organizational Intervention (3). Focuses on the development and/or change of community-based programs and organizations and the implementation and funding of community-based programs. Explores theoretical and conceptual basis of these interventions, drawing on material from community psychology, public health, and applied social psychology. Helps prepare students to become involved as professionals in community-based health or mental health interventions in a variety of roles as program developers, proposal writers, program implementers, and program managers. Prerequisite: instructor's consent.

PSY 943. Seminar in Prevention (3). Reviews the historical, theoretical, and empirical bases of prevention psychology. Presents contemporary models of prevention psychology including the ecological, social, and community mental health perspectives. Could include primary prevention, empowerment, community-based prevention, self-help, social policy, and the prevention of psychosocial problems through environmental intervention. Prerequisite: instructor's consent.

PSY 944. Practicum in Community Psychology (1–3). Provides supervised practice working in community-based organizations on such tasks as needs assessment, program development, and program evaluation. Organizational settings may be in the areas of mental health, health, and education. Services may be prevention-oriented. Repeatable for credit. Graded S/U only. Prerequisite: instructor's consent.

PSY 945. Seminar on Cultural Diversity (3). Examines theoretical frameworks and develops culturally appropriate strategies in therapy and prevention efforts in the community. Emphasizes understanding the importance of culture and how it may impact treatment and prevention outcomes. Focuses on developing skills to work effectively with diverse populations.

PSY 960. Ethical and Professional Issues in Clinical Psychology (3). Focuses on several pertinent professional, legal, ethical, and related issues and concerns that impact the self-identity, credentialing, practice, and status of contemporary clinical psychology. Includes an historical overview of the development of both the discipline and profession of clinical psychology; professional associations that represent each; the credentialing and education of clinicians; and the ethical standards. Prerequisite: instructor's consent.

PSY 961. Seminar in Cognitive-Behavioral Assessment (3). Surveys standard techniques used in determining the quality of cognitive-behavioral assessment techniques and procedures. Provides a description, critical analysis, and conceptualization of how such assessment methods as interviewing, behavioral observations, self-monitoring, self-report inventories, and standardized intelligence testing can be used to meet the goals of a cognitive-behavioral approach to psychological assessment. Prerequisite: instructor's consent.

PSY 961L. Cognitive-Behavioral Assessment Lab (1). Supplements PSY 961 by providing students with hands-on training and experience with an array of techniques and procedures used in conducting psychological assessments from a cognitive-behavioral perspective. Covers interviewing, self-report inventories, self-monitoring, behavioral observations, and the use of standardized intelligence tests. Graded S/U only. Prerequisites: concurrent enrollment in PSY 961 and instructor's consent.

PSY 962. Seminar in Cognitive-Behavior Therapy (3). Reviews the theoretical and empirical support for specific behavior therapeutic practices. Approaches may include systematic desensitization, flooding, contingency management techniques and cognitive therapies. Also discusses the interface between behavioral assessment and clinical practice. Prerequisite: instructor's consent.

PSY 962L. Cognitive-Behavioral Therapy Lab (1). Supplements PSY 962 by providing students with hands-on training and experience with an array of techniques and procedures used in conducting psychological interventions from a cognitive-behavioral perspective. Covers reinforcement procedures, desensitization, cognitive therapy, dialectical behavior therapy, and self-regulation procedures. Graded S/U only. Prerequisites: concurrent enrollment in PSY 962 and instructor's consent.

PSY 963. Practicum in Clinical Psychology (1–3).给予了学生进一步在发展临床技能的机会。学生在临床实习中与个别客户交谈，根据临床心理学，或其它适当地点。可能为重复学分。S/U only. Prerequisite: instructor's consent.

PSY 964. Development of Abnormal Behavior (3). Considers the descriptive characteristics of abnormal behavior; a developmental perspective. Considers the ecological, social-environmental, personal, and genetic/biological contexts and causes of such behavior. Discusses implications for preventative and clinical interventions. Prerequisite: instructor's consent.

PSY 965. Special Issues in Psychological Assessment. (1–4). Covers contemporary and developing approaches to psychological assessment identified by the department. Course procedures and content vary according to topic. Repeatable. Prerequisite: departmental or instructor's consent.

PSY 966. Special Issues in Psychotherapeutic Interventions (1–4). Covers contemporary and developing approaches to psychotherapy identified by the department. Course procedures and content vary according to topic. Repeatable. Prerequisite: departmental or instructor's consent.

PSY 967. Individual Intelligence Assessment (3). Cross-listed as CESP 855. Use of individual tests for assessment of intelligence. Examines the nature of intelligence; theory, administration, and interpretation of selected individual intelligence tests; and critical issues related to the assessment of intelligence. Includes case
simulation and practice activities. Prerequisites: CESP 822 and instructor's consent.

PSY 968. Child Abuse and Neglect (1). Cross-listed as CESP 707. Acquaints students with the etiological factors, potential indicators, consequences, reporting procedures, and treatment strategies associated with child abuse and neglect. Covers DSM-IV diagnostic categories associated with abuse and neglect.

PSY 969. Counseling Theory (3). Cross-listed as CESP 803. A study of selected theories of counseling. Prerequisite: admission to counseling or school psychology program or instructor's consent.

PSY 970. Principles and Philosophy of Counseling (3). Cross-listed as CESP 804. The development of a guidance philosophy, including a study of the helping relationship and the services that are part of school, agency, and other institutional settings. Prerequisite: admission to counseling program or instructor's consent.

PSY 971. Multicultural Issues in Counseling (3). Cross-listed as CESP 821. Students acquire knowledge and skills that enable them to offer help to individuals in a multicultural environment. Focuses include developing a sense of the student's own cultural identity, increasing sensitivity to cultural differences in help-seeking attitudes and behaviors, and understanding how the potential sources of cultural misunderstanding, biases, and prejudices may affect their counseling effectiveness. Prerequisites: CESP 701, 803 or 804, or instructor's consent.

PSY 972. Techniques of Counseling (3). Cross-listed as CESP 824. Examines and practices techniques of counseling through simulated counseling situations and extensive examination of counseling case studies. Prerequisites: CESP 728, 821, 822, and counseling major or departmental consent.

PSY 973. Group Counseling Techniques (3). Cross-listed as CESP 825. Examines different kinds of groups, group selection, communication patterns in groups, and issues to be addressed in group settings. Prerequisites: CESP 728, 803 (or concurrent enrollment), 804; and counseling major or departmental consent.

PSY 974. Family Issues in Counseling (2). Cross-listed as CESP 837. Teaches basic family processes and how they impact the growth and development of children and adolescents. Covers family systems theory, the family life cycle, cultural and social influences on families, healthy family functioning, the impact of substance abuse on the family, and the unique challenges faced by single parent and blended families. Presents basic family assessment and therapy techniques. Prerequisite: graduate standing.

PSY 975. Seminar in Psychotherapy (3). Provides an in-depth description and critical analysis of various theories and methods of psychotherapy, an examination of the efficacy of these therapeutic approaches, and a survey of common issues in psychotherapy, such as process and outcome, and client and therapist variables in the therapeutic process. Prerequisites: PSY 111 and instructor's consent.

PSY 976. Advanced Psychopathology (3). An overview of major categories of psychopathology consistent with the most recent edition of the Diagnostic and Statistical Manual of Mental Disorders. Reviews descriptive features of each diagnostic category and information on the clinical course and etiology. Examines differing definitions of psychopathology and paradigmatic approaches to the study of psychopathology. Prerequisite: instructor's consent.

PSY 977. Internship in Clinical Psychology (1–3). A planned one-year supervised clinical internship at an off-campus site approved by APPIC for training in clinical psychology. Gives the clinical student an opportunity to further develop and employ clinical skills in an applied supervised training setting. Graded S/U only. Prerequisite: adviser's consent.

PSY 990. Seminar in Current Developments (3). Intensive study of current issues, techniques, research, and application. Repealable for different topics for a maximum of 6 hours. Prerequisite: instructor's consent.

PSY 991. Judgment and Decision Making (3). Provides a graduate-level overview of the field of judgment and decision making. It covers methodological as well as theoretical topics. Full attention is given to theories of decision making as well as the heuristics and biases literature. Topics include confidence, learning from experience, affect, debiasing, and more. Prerequisite: instructor's consent.

Public Administration
See Urban and Public Affairs, Hugo Wall School of.

Religion (REL)

Graduate Faculty
Professor: Stuart Lasine

Although there is no graduate program in religion, the following courses may be taken for graduate credit.

Courses for Graduate/Undergraduate Credit

REL 780. Special Topics in Religion (1–3). Intensive study of topic(s) in religion. Discussion, reports and research projects. Repeatable for credit with departmental consent. Prerequisite: instructor's consent.

REL 790. Independent Study (1–3). For the student who is capable of doing graduate work in a specialized area of the study of religion not formally offered by the department. Repeatable for credit. Prerequisite: departmental consent.

Social Work (SCWK)

Graduate Faculty
Associate Professors: Brien Bolin (graduate coordinator), Linnea GlenMaye (director), Orren Dale
Assistant Professors: Tim Lause, Kyoung Lee, Teaching Unclassified Professionals: Courtney Boettcher, Sabrina Perez Glat
Instructor: Sheryl Chapman, Yelando Wilcoxson

Master of Social Work
The Master of Social Work (MSW) degree program has an emphasis in advanced generalist practice and is designed for people who are interested in entering the social work profession at an advanced professional level.

MSW Program Mission
The mission of the MSW program at Wichita State University is to prepare its graduates to be autonomous advanced generalist social work practitioners within complex, diverse, and ever-changing urban environments. Emphasis is placed on developing knowledge and skills for ethical, culturally competent and socially just and empowering interventions on all practice levels.

Accreditation Status
The MSW program is accredited through June 2015 by the Council on Social Work Education (CSWE).

Licensure
Graduates of the MSW program are eligible for licensure. Contact the School of Social Work or the Behavioral Sciences Regulatory Board for further information.

Admission Requirements
Admission to the MSW program requires that the applicant:
1. Have a baccalaureate degree from an accredited four-year institution(s) acceptable to the Graduate School;
2. Have evidence of a strong liberal arts background from an accredited college or university prior to enrollment. Applicants should be knowledgeable about diverse cultures; social problems; social conditions; and the social, psychological, and biological determinants of human behavior. Previous coursework should include a solid background in the liberal arts, as evidenced on the transcript by courses in the humanities (2), behavioral and social sciences (3), oral communication (1), written communication (2), human biology (1), analytical skills (1), and human diversity (1). Examples of courses in each area are provided in the admissions materials;
3. Have a grade point average of at least 2.750 based on the last 60 hours of graded coursework; and
4. Have completed applications, to both the MSW program and the Graduate School, postmarked no later than February 1 for the following fall semester.

Nonacademic Factors for Admission
Nonacademic considerations include experiences in providing social services, references, and personal narratives. Measures of volunteer as well as paid experience in social services contribute to candidate rankings. References are primarily asked to provide an indication of the applicant's suitability for entrance into the
profession. Indicators of readiness for graduate studies and of suitability for the profession are drawn from descriptions of life experience, motivation, career goals, and values as described in the applicant's personal statement and references.

Admission Procedure
To be reviewed for admission, applicants should do the following:
1. Request an application packet from the School of Social Work or download materials from wichita.edu/socialwork;
2. Submit to the Graduate School the designated application for admission and supporting transcripts; and
3. Submit to the School of Social Work by February 1 a completed MSW application, including a personal statement, three references, and documentation of academic work and professional training.

As described in the application materials, applicants should submit their references in sealed envelopes along with their completed MSW application to the School of Social Work. Applicants should be aware that their records can only be reviewed when all materials have been submitted and they have met eligibility requirements. Applicants will be notified of their admission status by the Graduate School.

Advanced Standing
The School of Social Work offers an advanced standing program. Interested applicants must have an undergraduate degree in social work from a social work program that is accredited by the Council on Social Work Education. Advanced standing students will complete 36 credit hours.

Full- and Part-Time Enrollment Options
Applicants choose to apply for either the full-time or the part-time track. Applicants admitted into the full-time program enroll in four full-time semesters, consisting of 12–14 hours a semester, not counting summer semester. All students, regular and advanced standing, are required to take SCWK 760 (1) in the summer semester.

Applicants admitted into the part-time program must enroll in 6–10 credit hours a semester, with the exception of summer semester, and complete the degree within four years or for advanced standing students, two years. Courses are sequential and are generally offered once a year. Applicants should contact the School of Social Work for further information on the part-time curriculum plan.

Field Practicum Requirements
In addition to classroom work, students enroll in field practicum. The foundation year practicum consists of 480 clock hours over the course of two semesters. The advanced generalist practicum consists of 700 clock hours over the course of two semesters, for a total of 1,180 clock hours. The MSW program's field practicum director makes arrangements for field practicum placements.

Transfer of Academic Credit
Transfer of credits from another MSW program will be considered on a case-by-case basis. As a general rule, only courses taken in a Council on Social Work Education accredited Master of Social Work program will be eligible for transfer of credits. The applicants must have received a B or better in the course(s) being considered for transfer. In most instances, transfer of credits will only be granted for first-year foundation courses or electives, if applicable to Wichita State University’s advanced generalist social work program. Students may transfer up to 6 elective hours from other graduate programs in related fields, if applicable to the advanced generalist specialization and/or content is comparable to WSU’s elective courses outside the social work program. Transfer of elective credit hours must be approved by the assigned adviser and the director of the MSW program at the time of admission to the MSW program.

Life Experience
In accordance with Council on Social Work Education accreditation requirements, academic credit will not be given for life experience or work experience in coursework or field practicum.

There will be no credit towards the social work degree for prior life or work experiences.

Nondegree Students
Students wishing to enroll in graduate social work courses for continuing education may do so on a space available basis. Nondegree students who then decide to pursue an MSW degree at Wichita State University must go through the normal admission procedures. A maximum of 12 credit hours taken prior to admission to the MSW program can be applied toward the MSW program. Nondegree seeking students who do not have a BSW degree from a CSWE accredited program may not enroll in social work practice classes. Only students admitted into the MSW program may enroll in field practicum courses.

Degree Requirements
The curriculum for the regular MSW program consists of 60 credit hours—46 hours of classroom work and 14 hours of supervised practicum. The curriculum for the advanced standing program consists of 36 credit hours—28 hours of classroom work and 8 hours of supervised practicum. The 60 hours for regular standing students and the 36 hours for advanced standing students includes 8 hours of graduate-level electives. Social work graduate elective courses are offered in the summer, spring and fall semesters of each year. Students must maintain a 3.000 grade point average; a grade of 2.000 is the minimum passing grade.

Thesis Option: Students are not required to complete a thesis, but do have the option of completing a thesis as part of their MSW degree. The thesis option requires a total of 3 hours of thesis coursework (SCWK 800). Students must be enrolled in at least 1 hour of thesis during the semester of graduation. Thesis hours can count toward the required 8 hours of electives. Students who are interested in the thesis option should discuss their interest in the thesis option with the graduate program coordinator prior to enrolling in the advanced (800-level or higher) curriculum.

Courses for Graduate/Undergraduate Credit
SCWK 541. Women, Children, and Poverty (3). Cross-listed as WOMS 541. Addresses the problem of poverty among women in the U.S. today, and examines existing and proposed public policies designed to alleviate the problem. Explores theoretical models of poverty policy analysis and the role of values in their formulation and implementation. Discusses issues of age, race and family, special attention is given to poverty among Kansas families. Prerequisite: 6 hours of social science.

SCWK 551. Independent Studies (1–3). Individual projects for social work students who are capable of doing independent work in areas of special interest. Repeatable for credit not to exceed 6 hours. Prerequisite: instructor's consent.

SCWK 556. Perspectives on Self-Help Groups (3). Cross-listed as NURS 566 and PSY 566. Provides an interactive format that constitutes a community resource for health and human service professionals and promotes an interdisciplinary understanding of the nature and diversity of self-help groups for persons with virtually any health problem or personal issue. Reviews contemporary theory and research, explaining the attractiveness and effectiveness of self-help groups. Panels of support group members share their experiences with self-help groups on such topics as addiction, cancer and other illnesses, eating disorders, bereavement, mental illness, and parenting.

SCWK 610. Topics in Social Work (1–3). Selected topics in practice, policy, research, and human behavior in the social environment within a selected field of social welfare. Covers specific topics identified by the program in
consultation with majors, groups of community practitioners, and area service institutions. Repeatable. Prerequisite: instructor’s or program consent.

**SCWK 700. Foundations of Generalist Practice I (3).** Provides foundation content in the knowledge and skills for empowerment-based generalist social work practice with individuals, families, groups, organizations, and communities. Includes professional role development, communication and interviewing theory, skill development in social work assessment, intervention, and evaluation methods. Corequisite: SCWK 720.

**SCWK 702. Foundations of Generalist Practice II (3).** Provides continued social work practice foundation content emphasizing developing generalist knowledge and skill at the group, organizational, community, and societal levels. Emphasizes material on group process and organizational and community leadership in the development of a problem-solving model for work with systems of all sizes. Prerequisite: SCWK 700 or instructor’s consent.

**SCWK 710. Micro Human Behavior and the Social Environment (3).** Provides theories and knowledge of human bio-psychosocial development and functioning of individuals and families, and of the transaction between individuals and families and their environment. Presents theoretical perspectives on development over the life span and family functioning. Explores areas of universality and differences across gender, race, ethnicity, class, physical and mental ability, and sexual orientation.

**SCWK 712. Macro Human Behavior and the Social Environment (3).** Provides theories and content on organizational and community structure, dynamics and change, social movements, large groups, and structural oppression, and provides a theory base for the contextualization of social work practice within diverse environments and macro systems. Emphasizes understanding the needs of minority communities and understanding change and empowerment strategies which further social justice in communities and organizations. Prerequisite: SCWK 710 or instructor’s consent.

**SCWK 717. Social Welfare Policy and Analysis (3).** Surveys social welfare institutions, emphasizing the strengths and weaknesses of programs within the context of the social problems they address. The comparison of these structures and provisions enables the development and use of frameworks for analyzing social policies and evaluating programs in light of the mission of the social work profession; the principles of social and economic justice, and the historical, economic, and political factors which impinge on policy. Content on the effects of policy and social work practice includes the uses of professional roles in shaping the processes of policy formulation in agency and governmental arenas.

**SCWK 720. Field Practicum I (3).** Placement in community social service agencies for supervised periods of observation and direct service assignments emphasizing development of basic practice knowledge and skills. Includes developing understanding of the social service agency and its role in the community service network. Corequisite: SCWK 700.

**SCWK 721. Field Practicum II (3).** Requires placement in community social service agencies for supervised periods of observation and direct service assignments emphasizing development of basic practice knowledge and skills. Promotes an understanding of the social service agency and its role in the community service network. Corequisite: SCWK 702.

**SCWK 713. Social Work and the Law (3).** Students develop an integrated, advanced generalist framework for interdisciplinary, advanced generalist practice within a legal setting. Students develop a basic knowledge of the law, the roles social workers play within the legal system and the issue of crime and social justice with respect to race and ethnicity. Students develop an understanding of how the law shapes and regulates social work practice and the actions of social workers and their clients alike. As legal and social problems are often interdependent, students develop skill in communicating with attorneys to enhance their effectiveness in resolving clients’ problems.

**SCWK 715. Social Work Workshops (1–5).** Selected topics in practice, policy, research, and human behavior in the social environment within a selected field of social welfare. Covers specific topics identified by the program in consultation with majors, groups of community practitioners, and area service institutions. Repeatable for up to a total of 6 hours of credit.

**SCWK 711. Social Welfare Policy and Analysis (3).** Introduces students to the components of quantitative and qualitative research methods and describes how research is designed to conduct studies which seek to improve social work practice. Introduces the basic concepts of the social work research process as well as the methods that are employed. Students develop a framework for critically evaluating 1) methods employed in current social work research; and 2) potential benefits of applying these research findings to social work practice. Prerequisite: program approval.

**SCWK 760. Advanced Generalist Practice Seminar I (1).** Requires students to apply advanced generalist practice skills and knowledge to an integrative project. The project demonstrates mastery of the competencies required of an advanced generalist practitioner. Graduating students are required to develop and present their completed projects in a public forum.

**SCWK 799. Directed Study (1–3).** Individual study with a focus developed in collaboration with a departmental faculty member. Allows students to pursue an area of special interest. Repeatable for up to 6 credit hours. Prerequisite: departmental consent.

**Courses for Graduate Students Only**

**SCWK 800. Thesis (1–3).**

**SCWK 810. Cultural Competency for Advanced Generalist Practice (3).** Examines the impact of culture, race, and ethnicity on client-worker interactions. Presents practice theories and interventions for culturally competent advanced generalist practice with different populations. Emphasizes experiential learning of cultural competence skills to provide services cross-culturally. Prerequisite: program consent.

**SCWK 816. Advanced Generalist Practice With Individuals (3).** Develops the advanced generalist practice competencies needed for intervention with individual clients. Evidence-based theories and practice intervention strategies are applied. Advanced generalist practice skills in work with clients from diverse backgrounds are developed, and critical thinking skills are enhanced in developing an advanced generalist practice perspective integrating individual clients with larger social systems.

**SCWK 817. Empowerment and Social Justice (3).** Provides students with advanced generalist skills, knowledge, and ethics for advanced policy practice roles within social agencies, communities, and political arenas. Examines the history, strategies, and approaches to advocacy and policy/program planning and development. Students demonstrate advanced skills in working with communities and policy processes on multiple levels.

**SCWK 822. Field Practicum III (4).** Placement in community social service agencies for supervised periods applying direct and indirect practice. Provides students the opportunity to integrate and apply advanced generalist practice theory within their field experience. Students are required to demonstrate increased knowledge and skills in practice, research, and evaluation across multi-level systems. Requires 350 hours of agency service. Prerequisite: program consent.

**SCWK 823. Field Practicum IV (4).** Continuation of SCWK 822. Requires 350 hours of agency service. Prerequisite: program consent.

**SCWK 832. Social Work Practice in the Schools (3).** Conveys an understanding of systemic intervention in schools using various intervention modalities. Focuses on the roles of social workers in schools, including provision of direct service, consultation, advocacy, program development, and evaluation, as well as liaison functions with families and community systems. Students integrate an understanding of child development, familial, and school crises that affect child development and the importance of the social worker/parent relationship.

**SCWK 833. Advanced Generalist Practice with Families and Groups (3).** Develops the advanced generalist practice competencies needed for intervention with families and groups. Evidence-based theories and practice intervention strategies are applied. Advanced generalist practice skills in work with families and groups from diverse backgrounds are developed, and critical thinking skills are enhanced in developing an advanced generalist practice perspective integrating families and group client systems with larger social systems.

**SCWK 851. Applied Social Work Research (3).** Prepares students to be ethical practitioners who assess the benefits of social work interventions on an ongoing basis. Because of the importance of evaluation in social work, students develop the research skills needed to evaluate their own practice, conduct program evaluations, use the computer as a research tool, and interpret descriptive and inferential statistics.

**SCWK 860. Advanced Generalist Practice with Organizations and Communities (3).** Develops the advanced generalist practice competencies needed for intervention with organizations and communities. Evidence-based theories and practice intervention strategies are applied. Provides advanced generalist practice skills in leading and managing organizations and intervening with diverse communities.

**SCWK 870. Clinical Assessment for Advanced Generalist Practice (3).** Uses a biopsychosocial perspective to understand problematic patterns of functioning identified.
as diagnoses in the DSM-IV. Students critically examine the DSM-IV as a basis for social work assessment and learn its use within an advanced generalist practice perspective. Prerequisite: program consent.

SCWK 899. Advanced Generalist Practice Seminar II (1). Requires students to apply advanced generalist practice skills and knowledge to an integrative project. The project demonstrates mastery of the competencies required of an advanced generalist practitioner. Graduating students are required to develop and present their completed projects in a public forum.

Sociology (SOC) Graduate Faculty
Professor: David W. Wright
Associate Professor: Twyla J Hill (graduate coordinator), Charles S. Koeber (associate dean, Fairmount College), Kathleen O'Flaherty Perez, Ronald R. Matson (chairperson)
Assistant Professors: Jodie L. Hertzog, Jennifer Pearson, Lisa E. Thrane

Master of Arts
The sociology department offers courses of study leading to the Master of Arts (MA) degree with options for thesis and nonthesis programs.

Admission Requirements
In addition to the Graduate School requirements for admission, the department of sociology requires: 1) a grade point average of at least 3.000 based on the last 60 hours of coursework; 2) one college algebra course and at least 15 hours in sociology including an introductory sociology course, one descriptive and inferential statistics course, two research methods courses, and one theory course (similar courses in other fields of study may be substituted at the discretion of the graduate coordinator); 3) three letters of reference from professors who are familiar with the student’s undergraduate coursework; and 4) a typed, double-spaced statement of purpose (approximately 500 words) articulating the student’s area of research interests and academic/career goals.

Degree Requirements
Students pursuing the MA degree in sociology may follow either a thesis or a nonthesis program.

Thesis Program. Students in the thesis program must take a total of 32 hours, including SOC 860, Proseminar—Teaching Sociology; SOC 801, Application of Advanced Statistical Techniques; SOC 812, Advanced Research Methods; SOC 845, Seminar in Sociological Theory; and two 800-level graduate seminars as well as completion of their thesis hours. Sixty percent of the 32 hours must be 700 level or above.

Nonthesis Program. Students in the nonthesis program must take a total of 36 hours, including SOC 860, Proseminar—Teaching Sociology; SOC 801, Application of Advanced Statistical Techniques; SOC 812, Advanced Research Methods; SOC 845, Seminar in Sociological Theory; and two 800-level graduate seminars, SOC 851, Directed Research, is needed to fulfill this requirement. A total of 60 percent of the 36 hours must be 700 level or above.

Examinations
Students electing the thesis program in sociology must pass an oral defense of the thesis.

Courses for Graduate/Undergraduate Credit
SOC 501. Sociological Statistics (3). Application of descriptive and inferential statistics to sociological problems. Includes computer experience with statistical software. Prerequisites: SOC 111, SOC 312 or concurrent enrollment, and MATH 111.

SOC 506. Psychology of Helping Relationships (3). Cross-listed as NURS 567 and PSY 506. Introduces students to a psychological perspective on helping relationships that is useful in both practice and research. Topics covered include the definition of relationship, and identification of the ways in which the roles of helper and help seeker can be structured to maximize effectiveness: e.g., power, distance, similarity, and reciprocity. Relationships of interest include counseling and psychotherapy, nursing and doctoring, family caregiving, mentoring, self-help/mutual aid, and volunteering. The emerging topic of relationship-centered care models in the education of health care professionals is discussed. Prerequisite: 6 hours in psychology including PSY 111 or instructor’s consent.

SOC 512. Measurement and Analysis (4). An applied study of the conceptual tools and methodological skills needed to conduct quantitative sociological research. Prerequisites: SOC 111, 312, 501.

SOC 513. Sociology of Aging (3). Cross-listed as GERO 513. Analyzes the social dimensions of old age, including changing demographic structure and role changes and their impact on society. Prerequisite: SOC 111.

SOC 515. Family Diversity (3). Analyzes the varieties of family forms in the U.S. with particular emphasis on the intersection of gender, race/ethnicity, social class, and sexual orientation. Attention is given to the reciprocal effects of families and their social environments and the impact of public policies on families. Prerequisite: SOC 111.

SOC 516. Sociology of Gender Roles (3). Cross-listed as WOMS 516. Analyzes the institutional sources of male and female roles, the source of changes in these roles, the consequent ambiguities and conflicts. Prerequisite: SOC 111.

SOC 517. Intimate Relations (3). Examines the social dimensions of intimacy including an analysis of intimacy in different types of relationships, i.e., romantic, friendship, marriage. Reviews theory and research in the area with a special focus on the place of intimacy in social interaction. Prerequisite: SOC 111.

SOC 520. Family and Aging (3). Cross-listed as GERO 520. Analyzes the families and family systems of older people. Emphasizes demographic and historical changes, caregiving, and intergenerational exchanges and relationships. Prerequisite: SOC 111 or GERO 100 or junior standing.

SOC 523. Sociology of Law (3). Considers the impact of law on society, the role of law in effecting social change, various methods of dispute resolution, and recent research on judicial, legislative, and administrative processes, all with the aim of comparing and evaluating strengths and weaknesses of legal systems, with partial, but not exclusive, emphasis on those societies using the common law. Prerequisite: SOC 111.

SOC 534. Urban Sociology (3). Studies the process of urbanization and its influence on the development of cultural and social structures throughout the world. Also discusses social problems associated with urbanization. Prerequisite: SOC 111.

SOC 537. The Social Consequences of Disability (3). An eclectic survey of the social aspects of disability showing the impact of social values, institutions, and policies upon adults with disabilities. Appropriate for both students of sociology and the service professions. Prerequisite: SOC 111.

SOC 538. Medical Sociology (3). Analyzes social and cultural factors related to physical and mental illness. Also includes the dynamics of communication and role relationships among patients and medical personnel and social research and theory relevant to the health professions. Prerequisite: SOC 111.

SOC 539. Juvenile Delinquency (3). The factors related to juvenile delinquency and the measures of treatment and prevention. Prerequisite: SOC 111.*

SOC 540. Criminology (3). The extent and nature of criminal behavior and societal reactions to it. Prerequisite: SOC 111.*

SOC 541. Contemporary Corrections (3). Historical and contemporary programs for the treatment of offenders viewed as societal reactions to criminal behavior. Prerequisite: SOC 539 or 540.*

SOC 543. Aging and Public Policy (3). Cross-listed as GERO 543. Seminar-style course explores the impact of an aging population on social institutions, covers the history of American aging policies, the organization and financing of health care for the elderly, and discusses policy analysis as an evaluation tool for comparing public approaches to responding to the needs of an increasingly diverse aging population. Considers the process of policy formation, identifies key players and interest groups and contrasts political ideologies regarding federal, state and private responsibilities for older people. The course emphasizes Social Security, the Older Americans Act, Medicare, and Medicaid as policy examples. Also looks at the potential contributions of the older population to society (volunteer services, provision of family care, etc.) as affecting and affected by policy. Prerequisite: SOC 111 or GERO 100 or junior standing.

SOC 545. Sociological Theory (3). Generally offered fall semester only. A comprehensive survey of sociological theory, spanning both classical and contemporary theorists relevant to the development of sociology. Prerequisite: 9 hours of sociology.
SOC 598. Internship (1–6). Supervises persons involved in internships or placements in the community where credit can be given. Prerequisite: departmental consent.

SOC 600. Selected Topics in Sociology (3). Study in a specialized area of sociology emphasizing student research projects. Includes deviant behavior, political sociology, and the family. Repeatable for a maximum of 6 hours credit. Prerequisites: SOC 512 or departmental consent.

SOC 651. Directed Research (3). Gives the student further research skills in an area of special interest. All students are under the direction of a member of the graduate faculty who guides them in developing research skills. Prerequisites: SOC 512 or equivalent and instructor's consent.

SOC 670. Independent Reading (1–3). For the advanced student capable of doing independent work in an area of special interest. Prerequisites: 15 hours of sociology and instructor's consent.

SOC 781. Cooperative Education in Sociology (1–4). Provides practical experience, under academic supervision, that complements the student's academic program. Consultation with, and approval by, an appropriate faculty adviser is necessary. With adviser approval, up to 4 hours of cooperative education may count toward graduate degree requirements. Graded CR/NC only.

*Prerequisite may be waived with departmental consent.

Courses for Graduate Students Only

SOC 801. Application of Advanced Statistical Techniques (3). Usually offered fall semester only. Seminar demonstrates the application of statistical packages via mainframe and personal computers to analyze data and interpret the output. Examines statistical tests from univariate to multivariate. Prerequisite: SOC 501 or departmental consent.

SOC 812. Advanced Research Methods (3). Through classical and contemporary readings, graduate students deepen their understanding of the methodological steps of the research process. Students address methodological issues while conducting a research project using design methodologies, sampling practices, and measurement strategies. Prerequisite: SOC 512 or departmental consent.

SOC 815. Seminar on the Family (3). Review of recent research on the family and the theoretical implications thereof. Prerequisite: SOC 515 or departmental consent.

SOC 820. Seminar in Social Movements (3). Analyzes the elements in social movements as factors in social and cultural change. Prerequisite: departmental consent.

SOC 825. Seminar in Organizational Analysis (3). Explores selected problems in organizational theory based on major theoretical and empirical approaches, both classical and contemporary. Prerequisite: departmental consent.

SOC 830. Seminar in Stratification and Power Structure (3). Examines different theoretical and methodological approaches to understanding stratification and class analysis. Prerequisite: departmental consent.

SOC 834. Seminar in Urban Sociology (3). Through classical and contemporary readings, course examines issues and concerns of countries in the process of urbanization. Prerequisite: SOC 534 or departmental consent.

SOC 845. Seminar in Sociological Theory (3). Usually offered spring semester only. Examines classical and contemporary sociological theories and focuses on including the application of such theories in student's thesis and nonthesis projects. Prerequisite: SOC 545 or departmental consent.

SOC 847. Seminar in Recent Developments in Sociology (3). Major issues, new theories, new techniques of research, new areas of research, and new applications. Repeatable for credit but not to exceed 6 hours. Prerequisites: 15 hours of sociology and departmental consent.

SOC 851. Directed Project (1–3). A project conducted under the supervision of an academic advisor for the nonthesis option. Requires the completion of a written report and an oral presentation of the research to the faculty. Prerequisite: consent of academic advisor.

SOC 860. Proseminar—Teaching Sociology (1). Usually offered fall semester only. Examines the academic roles of sociologists. Prerequisite: departmental consent.

SOC 870. Independent Reading (2–3). Advanced systematic reading in a topical area under the tutelage of a member of the graduate faculty. Repeatable for credit not to exceed 6 hours. Prerequisite: departmental consent.


Urban and Public Affairs, Hugo Wall School of

The Hugo Wall School of Urban and Public Affairs is committed to enhancing the quality of public life through high-quality graduate instruction, excellence in applied research, and responsive community service. This focus results not only in an excellent graduate education for students, but also allows a special connection with the community’s needs through research and service. By integrating teaching, research, and service, the school makes a distinctive contribution to Wichita State University’s long-standing commitment of service to Wichita and the surrounding communities, and the region.

The school serves as the academic home for the Master of Public Administration degree, the Center for Urban Studies, and the Kansas Public Finance Center. Through these units, faculty, staff, and students blend teaching, research, and service in the interdisciplinary field of urban and public affairs. The Hugo Wall School offers special opportunities for students interested in urban and public affairs. Students completing the Master of Public Administration degree gain experience through hands-on research, and network with practitioners in the field of public administration.

Financial Assistance

The school has two forms of financial aid available to provide students with financial assistance, as well as an opportunity to be directly involved with research and service projects. Financial aid in the form of graduate assistantships and fellowships is awarded competitively on the recommendation of the faculty in the Hugo Wall School of Urban and Public Affairs.

Graduate assistants aid faculty in the Hugo Wall School in instruction, as well as work directly with faculty and professional staff on research and community service projects through the Center for Urban Studies and the Kansas Public Finance Center. Graduate assistants work 20 hours per week with faculty and staff in the school’s teaching, research, and public service activities.

The Hugo Wall School has four endowed fellowships available for financial assistance to qualifying graduate students enrolled in the Master of Public Administration degree. These fellowships—the Hugo Wall, George Pyle, Mike Hill, and George Van Riper—are awarded on a competitive basis to students with exemplary records and specific career interests in the field of public administration.

Public Administration (PADM) Graduate Faculty

Professors: H. Edward Flentje, Mark A. Glaser, John D. Wong, (interim director), Hugo Wall School and Center for Urban Studies), Samuel J. Yeager (graduate coordinator)

Associate Professors: Nancy McCarthy Snyder, Melissa Walker

Master of Public Administration

The Master of Public Administration (MPA) degree program, with instruction in public management, public finance, and public policy, prepares students for positions of leadership in public and nonprofit organizations. The degree is structured to respond to the unique student body of an urban university. The Master of Public Administration program is accredited by the National Association of Schools of Public Affairs and Administration (NASPAA).

The Master of Public Administration (MPA) degree draws upon the methods and perspectives of the social and behavioral sciences, economics, and the humanities. The link between these disciplines and the challenges of public management are emphasized through the use of practitioners in the classroom, policy-relevant research assignments, public affairs seminars, and internships. Teaching faculty, with significant professional experience in state and local government, are engaged in cutting-edge activities.
research relevant to public and nonprofit organizations in Kansas. This experience allows faculty to bring relevant perspectives on public management into the classroom.

Graduates of the MPA degree program now hold positions of responsibility in state and local government and in nonprofit agencies throughout the United States and in other countries. Graduates serve as city managers and department heads, program managers, finance directors, budget analysts, management analysts, and agency planners. Although the majority are employed in public service, some graduates of the program have taken positions in the private sector, while still others have pursued additional study in law, doctoral education, or other specializations.

Admission Requirements
The faculty in the Hugo Wall School of Urban and Public Affairs recruits students for the Master of Public Administration degree who are highly qualified and motivated to serve in positions of leadership in public and nonprofit organizations. A mix of preservice and inservice students are recruited for the degree program. Preservice students are generally those who have recently graduated with a baccalaureate degree, have limited work experience, and want to work toward a degree on a full-time basis. Inservice students are generally those who have relevant work experience and want to continue working while pursuing a degree on a part-time basis.

The Master of Public Administration degree is designed for students to begin study in the fall semester, and primary consideration for admission occurs each spring with a deadline of April 1. Admission of students wanting to begin study in the spring semester is considered on an exceptional basis and class availability. The deadline for spring admissions is November 1. Admission to the MPA program is a two-part process.

First, students seeking admission to the Master of Public Administration degree must apply through the Graduate School. Admission to the Master of Public Administration degree requires students to have completed an undergraduate degree from a regionally accredited college or university and have a grade point of at least a 3.000 (4.000 system) in the last 60 hours including any post-graduate work. International students must attain a minimum score of 600 paper-based, 250 computer-based, or 100 Internet-based on the Test of English as a Foreign Language (TOEFL), or an overall band score of 7.5 on the IELTS.

Second, the Hugo Wall School requires applicants to submit to the graduate coordinator of the Hugo Wall School: 1) a letter of application outlining a student’s career plans and how the MPA degree would further those plans; 2) a resume including the student’s work and volunteer experience; and 3) two letters of reference from individuals with direct knowledge of a student’s work experience or academic performance.

Faculty will consider exceptions to the minimum grade point requirement (3.000 in the last 60 hours) based on a student’s academic record, career plans, work and volunteer experience, and letters of reference. In reviewing requests for exceptions faculty give consideration to achieving a diverse student body, racially and culturally, and a balance of preservice and inservice students.

Degree Requirements
The Master of Public Administration degree consists of 39 graduate hours, taken over at least three semesters of study.

Core Curriculum. All degree candidates are required to complete the eight core courses:
- PADM 702 Research Methods in Public Administration
- PADM 710 Public Sector Organizational Theory and Behavior
- PADM 725 Public Management of Human Resources
- PADM 745 Public and Nonprofit Governance
- PADM 765 Public Sector Economics
- PADM 802 Quantitative Methods for Public Sector Professionals
- PADM 865 State and Local Government Finance
- PADM 895 Public Decision Making

Areas of Emphasis. In addition to the core, students develop an area of emphasis approved by an adviser. Students may select areas that fit their career interests. Common areas include state and local government management, financial management, and policy analysis.

Internships
Internships are an important part of the MPA program. Preservice students are encouraged to take an internship which must last at least nine months. Internship (PADM 890) carries 3 hours of credit and includes attendance at periodic seminars. Intern positions are remunerative and are awarded on a competitive basis. Although placement cannot be guaranteed, the public administration program has an excellent placement record.

Graduate Certificate in City/County Management
This graduate certificate program offers advanced study in city and county management. The program enhances students’ career opportunities and provides state and local practitioners in city and county management an avenue to improve their skills. The core courses include PADM 725, Public Management of Human Resources; PADM 825, State and Local Government Administration; PADM 865, State and Local Government Finance; and one of the following: PADM 560, Planning Process; PADM 760, State and Local Economic Development; PADM 775 Local Government Law; or PADM 785, Public Works Administration.

Graduate Certificate in Economic Development
This graduate certificate program offers advanced study in economic development by state and local governments. The program enhances students’ career opportunities and provides state and local practitioners in economic development an avenue to improve their skills. The four courses include: PADM 560, Planning Process; RE 619, Urban Land Development; PADM 688 or ECON 688, Urban Economics; and PADM 760, State and Local Economic Development.

Graduate Certificate in Nonprofit Management
This graduate certificate program offers advanced study in nonprofit management. The program enhances students’ career opportunities and provides practitioners in nonprofit organizations an avenue to improve their skills. The core courses include PADM 725, Public Management of Human Resources; PADM 865, State and Local Government Finance; PADM 870, Fundraising and Financial Management in Nonprofit Organizations; and one of the following: ECON 663, Economic Insecurity; PADM 845, Public Policy Analysis and Program Evaluation; PADM 871, Community Networks; or PADM 872, Alternative Service Delivery.

Graduate Certificate in Public Finance
This graduate certificate program offers advanced study in public finance. The program enhances students’ career opportunities and provides public finance practitioners an avenue to improve their skills. The four-course sequence includes: PADM 765, Public Sector Economics; PADM 865, State and Local Government Finance; PADM 866, Public Financial
Management; and PADM 867, State and Local Government Budgeting.

Successful completion of these certificate requirements is noted on the student’s university transcript, and a graduate certificate is awarded by Wichita State University. Application for the certificate program requires completion of a bachelor’s degree, core prerequisites, and admission to the Graduate School.

Courses for Graduate/Undergraduate Credit

PADM 501. Integrity in Public Service (3). Cross-listed as CJ 501. Exposes the student to basic principles of personal and professional integrity and how those principles apply to daily life as a member of the community and as an employee of a government or social service agency. Employs a case study method, using cases and examples from a wide range of government and non-profit agency experiences. Students become aware of the moral and ethical issues which may arise in their professional and personal lives; begin to develop critical thinking and analytical skills regarding ethical behavior; and become more personally and professionally responsible. Prerequisite: junior- or senior-level or instructor’s permission.

PADM 500. Workshop (3). Specialized instruction using variable formats in relevant urban and public affairs subjects. Repeatable for credit up to 6 hours.

PADM 506. The Planning Process (3). For students desiring to work in an urban planning agency or who will be involved in planning issues as an administrator at the city, county, state, or federal level. Also for students seeking an understanding of the complex process of urban-related life. Examines the role of planning in solving human and environmental problems. Emphasizes the relationship between specialists, citizens, and elective officials as participants in the planning process.

PADM 585. Management in the Nonprofit Sector (3). Examines the management and governance of nonprofit organizations. Includes strategic planning, marketing and fund-raising, management of financial and human resources (including volunteers), governing structures, and the role of boards.

PADM 621. Environmental Law (3). An in-depth analysis of emerging federal, state, and local legislation; judicial decisions, and administrative policies in environmental protection. Explores the roles of a variety of governmental agencies and nongovernmental organizations as related to prevention and enforcement processes of environmental protection. Includes issues in the development and implementation of environmental policy. Prerequisite: instructor’s approval.

PADM 625. Computer Applications for Public Policy (3). Familiarizes students with major types of software applications for microcomputers and their use in public policy analysis.

PADM 651. Dispute Resolution (3). Examines a range of topics including causation, typologies, communication, mediation, arbitration, and other dispute resolution techniques. Includes criminal and victim mediation and both inter-group and inter-organization relations and dispute resolution techniques. Analyzes case studies.

PADM 688. Urban Economics (3). Cross-listed as ECON 688. A survey of the economic structure and problems of urban areas on both the microeconomic and macroeconomic levels. Stresses the application of regional economic analysis in the study of urban areas as economic regions. Prerequisites: ECON 201 and 202, or ECON 800, and junior standing.

PADM 700. Urban Affairs (3). A study of the policy issues faced by local government in an urban setting from a multidisciplinary point of view.

PADM 702. Research Methods (3). Cross-listed as GERO 702. acquaints students with applied public policy research methods. Emphasizes locating, collecting, appraising, and using both primary and secondary sources of data of the type used in policy, planning, and administrative research. Students must complete several short research projects.

PADM 710. Public Sector Organizational Theory and Behavior (3). Cross-listed as POLS 710. Reviews the scope of the field of public administration, including a survey of key concepts and schools of thought underlying the field, and examines issues shaping the future development of the field.

PADM 725. Public Management of Human Resources (3). Cross-listed as POLS 725. Surveys the major areas of management of human resources in the public sector. Includes hiring, training, evaluation, and pay promotion policies. Emphasizes the laws governing public personnel management and the unique merit, equal employment opportunity, productivity, unionization, and collective bargaining problems found in the public sector.

PADM 745. Public and Nonprofit Governance (3). Designed to help students develop an understanding of: a) the governmental and political complexities within which public administration operates; b) the nonprofit sector—including its major public-benefit sub components—and its role in the public administration environment; and c) challenges facing both public and non-governmental actors. Students should develop a working awareness of the significant concepts and components of the governance, policies, and institutions, that enables them to analyze forces of change in this challenging environment.

PADM 750. Public Administration Workshops (1–3). Specialized instruction using variable formats in a public administration or urban affairs relevant subject. Repeatable for credit.

PADM 755. Special Topics in Urban and Public Affairs (3). Provides students with an opportunity to engage in advanced study in topics that are of immediate concern and arise only occasionally. Content varies with issues that arise, student needs, and faculty expertise. Directed to Master of Public Administration students. May be repeated if topics are different. Prerequisite: instructor’s consent.

PADM 760. State and Local Economic Development (3). Explores the roles of state and local governments and officials in economic development through the use of case studies. Examines financing in economic development from the perspectives of public purpose and community objectives.

PADM 765. Public Sector Economics (3). Cross-listed as ECON 765. An analysis of fiscal institutions and decision making in the public sector of the American economy, budget planning and execution, taxation, debt, and fiscal policy. Prerequisites: ECON 201 and 202 or instructor’s consent.

PADM 775. State and Local Government Law (3). Exposes students to the legal principles which undergird the foundation of governmental operation and administration.

PADM 785. Public Works Administration (3). Introduces public works administration and management. Includes discussion of public works professionals; public works organizations and institutions; infrastructure planning, policy, and project analysis; procurement, purchasing, and contract administration; geographic information systems; and transportation, water, waste water, and surface water system construction, maintenance, and replacement.

PADM 798. Independent Study (1–3). For graduate students to pursue research in areas not normally covered in coursework. Repeatable for credit with departmental consent. Prerequisite: departmental consent.

Courses for Graduate Students Only

PADM 802. Quantitative Methods for Public Sector Professionals (3). Uses standard microcomputer statistical software and analysis to introduce statistics and quantitative analysis for organizational and policy decision making. Emphasizes the application of statistics and writing with quantitative evidence to real public sector policy questions. Assumes little or no background in statistics and software applications. Prerequisite: PADM 702.

PADM 825. State and Local Government Administration (3). Examines administrative leadership in state and local government through case study and field experience. Draws on the experience of professional public managers. Designed for students nearing completion of the Master of Public Administration degree and planning careers in public management. Prerequisite: instructor’s consent.

PADM 845. Public Policy Analysis and Program Evaluation (3). An overview of approaches to public policy analysis and program evaluation. Examines the roles of participants in public policy development, implementation, and evaluation. Explores policy and program functions and their intended and unintended impacts. Focuses on methodologies for collection of data and their use in the assessment of programs and program impacts. Prerequisites: approved statistics class and an approved methods class.

PADM 865. State and Local Government Finance (3). Cross-listed as ECON 865 and POLS 865. Analyzes state and local government expenditure and revenue systems; introduces state and local financial administration. Prerequisite: PADM 765 or instructor’s consent.

PADM 866. Public Financial Management (5). Cross-listed with FIN 866. Deals with selected aspects of state and local government financial management. Introduces fund accounting, costing of government services, capital budgeting, debt management, and asset management. Prerequisite: PADM 865 or instructor’s consent.

PADM 867. State and Local Government Budgeting (3). Analyzes the development and use of the budgetary process in government administration emphasizing the budget in relation to its role in policy formulation and
management. Prerequisite: PADM 865 or instructor's consent.

**PADM 868. Seminar in Public Finance Systems (3).** An analytical study of selected topics in the politics and administration of revenue, expenditure, and borrowing policies of governmental organizations. Prerequisite: departmental consent.

**PADM 870. Fundraising and Financial Management for Nonprofit Organizations (3).** Focuses on fundraising and financial management in nonprofit organizations. Examines fundraising from public and private sources including funding research, proposal writing, and budgeting. Includes analysis of financial statements for the purpose of managing both the short-term and the long-term financial condition of a nonprofit organization. Prerequisite: PADM 865.

**PADM 871. Community Networks (3).** Students learn how to use systems logic to define problems and develop collaborative solutions through networks that involve governmental and nongovernmental organizations. Prerequisites: PADM 702, 745, and 802.

**PADM 872. Alternative Service Delivery (3).** An overview of alternative forms of public service delivery other than the direct provision of services by government. Alternative service delivery encompasses the use of private businesses, community or nonprofit groups, individual volunteers, and public-private partnerships to deliver public services. Some alternative delivery mechanisms include: the use of grants and vouchers; managed competition; franchising; contracting; service agreements; design/build/operate/finance; and service shedding.

**PADM 890. Internship (3).** Integrates academic pursuits and practical experience. Students admitted to the internship are assigned to work in an approved government, community, or private organization for a minimum of nine months. Prerequisites: completion of all PADM core courses and 6 hours of additional graduate-credit courses.

**PADM 895. Public Decision Making (3).** Focuses on decision making by public managers through case study method. Reviews models of public decision making. Examines public management from the perspective of public purposes, politics, organizational results, and ethics. Prerequisites: successful completion of all other core courses in the MPA or instructor’s consent.

**PADM 897. Advanced Research Methods (3).** Advanced research course; studies the selection and formulation of research problems, research design, hypothesis generation, scale construction, sampling procedures, and data analysis and interpretation.

**PADM 898. Applied Research Paper (3).** Original research project under a faculty member’s direction. Project requires conceptualization, execution, preparation of a written report, and defense of that report before a faculty committee. Intended to be a major project or capstone activity completed at the end of a student’s program of study. It must be an individual effort, not a group project. Prerequisite: graduate-level research methods class.

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**Women’s Studies (WOMS) Graduate Faculty**

*Associate Professors: Deborah Gordon, Ramona Liera-Schwichtenberg (chairperson), Chinyere Okafor*

*Assistant Professor: Doris Chang*

Students may earn a master’s degree in several areas with an emphasis in women’s studies. These include curriculum and instruction; counseling, educational, and school psychology; sociology; and cross-cultural communication. Women’s studies may be included as one of two or three areas of interest under the MA degree in liberal studies, an individually designed, interdisciplinary graduate program (described in the Fairmount College of Liberal Arts and Sciences, Liberal Studies section of the Graduate Catalog). In other areas, such as the community/clinical program in psychology, students may orient course electives and thesis research to accommodate an interest in women’s studies. The following courses are available for graduate credit.

**Courses for Graduate/Undergraduate Credit**

**WOMS 510. Hollywood Melodrama: The Woman’s Film (3).** Melodrama, as a “woman’s genre,” is important to the development of feminist film criticism, which interrogates the contradictory meanings of motherhood and family within this culture. Through readings and films, this course provides a stylistic, literary, and cultural/historical background for this 19th-century form with a specific focus on the woman’s film and the family melodrama which highlight women’s position within the home. Uses textual analysis and some psychoanalytic criticism to explore and critique the fantasies and desires expressed in the visual excesses of film melodrama.

**WOMS 513. Women in Africa (3).** Who is the African woman? What are her joys, obstacles, struggles, triumphs, and rites of passage? This course addresses these issues through their intersection with gender, race/ethnicity, and class in selected traditional and postcolonial settings on the African continent. Facilitates appreciation of African women and gender through African cultural voices. Emphasizes the views of women expressed in their songs, dances, dramas, ritual actions, activism, and writing. Telephone/video conference with women in Africa, as well as stories, poems, and other literary, historical, and anthropological material are used.

**WOMS 514. Women in the Middle East (3).** Examines Arab women of the Middle East. Focuses on women in the region historically designated as the fertile plains—Egypt, Lebanon, Syria, Jordan, and the Palestinian Territories. Covers the impact of Western colonialism and global geopolitics on women’s lives; women’s activism in relation to nationalism and women’s rights; Western racial stereotypes of Arab women and men and their role in foreign intervention in the 20th and 21st centuries. Provides case study in the relationship of nationalism and women’s rights as framed by Arab women’s studies.

**WOMS 516. Sociology of Gender Roles (3).** Cross-listed as SOC 516. Analyzes the institutional sources of male and female roles, the source of changes in these roles, the consequent ambiguities and conflicts. Prerequisite: SOC 111.

**WOMS 523. Feminist Film Criticism (3).** Applies critical methods of analysis from the field of feminist film studies (such as psychoanalysis, ideology critique, close textual analysis, narrative, and genre criticism) to the representation of women in film. Emphasizes historical development of feminist film theory and criticism as it relates to classical Hollywood narrative, film genres, and avant-garde film. Prerequisite: 3 hours of upper-level humanities or 3 hours of upper-level women’s studies.

**WOMS 532. Women in Ethnic America (3).** Cross-listed as HIST 532. An in-depth, thematic understanding of the historical experiences of women of color across space and time in U.S. history. Employing a female-centered framework of analysis, course probes the intersections of race, class, gender, and sexuality in women’s lives.

**WOMS 533. Women and the Law (3).** Introduces the legal aspects of women’s rights, including the equal rights amendment to the U.S. Constitution, right to choose a name, sex discrimination in employment, education, and credit; welfare and criminal justice. Also considers women in the field of law, such as lawyers and legislators.

**WOMS 534. Psychology of Women (3).** Cross-listed as PSY 534.

**WOMS 536. Writing by Women (3).** Cross-listed as ENGL 536. Explores various themes in critical approaches to literature composed by women writers, especially those whose works have been underrepresented in the literary canon. Genders and time periods covered, critical theories explored, and specific authors studied vary in different semesters.

**WOMS 537. Contemporary Women’s Drama (3).** Examines contemporary plays by and about women to discover and explore the insights of the various playwrights into the lives and roles of women. In addition to reading and analyzing plays, students write plays of their own.
WOMS 541. Women, Children, and Poverty (3). Cross-listed as SCWK 541. Addresses the problem of poverty among women in the U.S. today, and examines existing and proposed public policies designed to alleviate the problem. Explores theoretical models of poverty policy analysis and the role of values in their formulation and implementation. Discusses issues of age, race, and family; special attention is given to poverty among Kansas families. Prerequisite: 6 hours of social sciences.

WOMS 542. Women in Other Cultures (3). Cross-listed as ANTH 542. Deals with the place of women in primitive and other non-Western societies, in various aspects of culture: political, economic, social, religious, domestic, intellectual, psychological, and aesthetic. Compares and contrasts societies in order to see how different kinds of roles for women are related to different kinds of societies.

WOMS 543. Women and Health (3). Cross-listed as NURS 543. Examines the historical development of the women's health movement, focuses on current issues relevant to women and health care, and explores the roles of women in the health care system and as consumers of health care. Examines self-care practices of women and studies ways to promote positive health practices. Open to non-nursing majors.

WOMS 570. Directed Readings (1–3). For students who wish to pursue special reading or research projects not covered in coursework. Prerequisite: instructor's consent.

WOMS 580. Special Topics (1–3). Focuses on advanced topics of interest to women's studies.

WOMS 586. Gender, Race, and Knowledge (3). Examines construction of objects that lie at the boundary between popular and academic or "official" knowledge (understanding of objects, people, events, and activities). Examines those objects within gender and race frameworks in women's studies. Thematically organized, problem focused and methodologically interdisciplinary. Past topics include "America, Post 9/11," "A Genealogy of the Middle East," science, modernity, and anthropology.

WOMS 587. Theories of Feminism (3). Because feminism is not a single ideological stance or perspective, course examines a variety of ideas underlying feminist cultural critiques and visions for social change. Discusses the contribution of women's studies to various academic disciplines. Prerequisites: WOMS 287 and 387, or 6 hours of women's studies courses, or instructor's consent.

WOMS 588. Gender, Race and the West/East Divide (3). Examines critically the role of gender and race in the making of a supposed essential divide between "the West" and "the East." Students are introduced to Edward Said's concept of Orientalism and the field of critique that targets how Europe and the U.S. craft an identity "the West" via its other, called variously, "the Orient," "Islam," the "Muslim world," and the "Arab world." Questions explored include: What is Orientalism? What is the relationship between colonialism/imperialism and the representation of "the Orient" or "the East." How, for whom, and for what purposes do gender and race matter in this construct of a divide between West and East? These questions are examined across genres and media—i.e., in travel accounts, films, literature, policy making, and news reporting.

WOMS 635. Leadership Techniques for Women (3). Cross-listed as COMM 635. Provides the female student experience in decision making and improves skills in leadership through role playing and exercise in group dynamics.

WOMS 701. Selected Topics in Women's Studies (3). Repeatable for credit up to 6 hours. Prerequisite: departmental consent.

Courses for Graduate Students Only

WOMS 870. Directed Readings. (2–3). For graduate students to pursue research in areas not normally covered in coursework. Repeatable for credit with departmental consent. Prerequisite: instructor's consent.

WOMS 880. Seminar in Women's Studies (3). Intensive study of selected women's studies topics. Seminar discussion, reports, and research project. Previous topics include: Advanced Theories of Feminism and Contemporary Women's Fiction. Repeatable for credit with departmental consent. Prerequisite: instructor's consent.

The following abbreviations are used in the course descriptions; R stands for lecture and L for laboratory. For example, 4R; 2L means 4 hours of lecture and 2 hours of lab.
# Key to Course Descriptions

## Symbols

When two course numbers are joined by a hyphen (-), the first semester is prerequisite to the second; when the numbers have an ampersand (&) between them, the two semesters may be taken in either order. Unless specifically noted otherwise, the first course listed is offered in the fall semester and the second in the spring.

The number of hours of credit for each course is indicated in parentheses following the course title. The number of class meetings per week is normally the same as the number of credit hours. Two hours of laboratory work usually are required for 1 hour of credit. In courses involving meetings other than lectures, the following symbols are used: R, lecture; L, laboratory; C, conference; D, demonstration; and P, practicum/clinical, with the hours of practicum/clinical per week given in front of the letter (6-8P means six to eight hours of practicum/clinical per week).

## Abbreviations

The following abbreviations of academic departments and subject areas are used in references to courses offered by those departments.

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<thead>
<tr>
<th>Abbreviation</th>
<th>Department/Subject Area</th>
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<tr>
<td>ACCT</td>
<td>Accounting</td>
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<tr>
<td>AE</td>
<td>Aerospace Engineering</td>
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<td>ANTH</td>
<td>Anthropology</td>
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<td>ARTE</td>
<td>Art Education</td>
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<td>ARTF</td>
<td>Art and Design Foundation</td>
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<td>ARTG</td>
<td>Graphic Design</td>
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<td>ARTH</td>
<td>Art History</td>
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<td>ARTS</td>
<td>Studio Arts</td>
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<td>BADM</td>
<td>General Business Adminstration</td>
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<td>BIOE</td>
<td>Bioengineering</td>
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<td>BIOL</td>
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<td>BLAW</td>
<td>Business Law</td>
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<td>CESP</td>
<td>Counseling, Educational, and School Psychology</td>
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<td>Criminal Justice</td>
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<td>Real Estate and Land Use Economics</td>
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<td>Religion</td>
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<td>Sport Management</td>
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<td>Theatre</td>
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<tr>
<td>WOMS</td>
<td>Women’s Studies</td>
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</table>
Graduate Faculty—2010-2011 (as of December, 2009)

Full Membership

Date or dates following title refer to time of initial and successive appointments. Faculty listed have academic rank.

Abdinnoor-Helm, Sue, Omer Professor in Business, Department of Finance, Real Estate, and Decision Sciences (1998). BS, Birzeit University, 1983; MS, Southampton University, 1988; PhD, Indiana University, 1994.


Ahmed, Ikramuddin, Associate Professor, Mechanical Engineering (2000). BSME, Bangladesh University of Engineering and Technology, 1988; MSME, University of Texas-Austin, 1993; PhD, 1997.

Alagic, Mara, Associate Professor, Curriculum and Instruction; Assistant Dean of the Graduate School (1999). BA/MA, University of Belgrade, Yugoslavia, 1975; PhD, 1985.


Armstrong, Richard N., Associate Professor, Elliott School of Communication, and Director, Basic Oral Communication Program (1987). BA, Southern Utah University, 1972; MA, Brigham Young University, 1974; PhD, Bowling Green State University, 1978.


Azupe, Dinorah, Assistant Professor, Political Science (2005). BA, University Rafael Landivar, 1985; MA, University of Pittsburgh, 1999; PhD, 2003.

Badee, Barry T., Associate Professor and Director, School of Art and Design (1993). BFA, Virginia Commonwealth University-Richmond, 1985; MFA, Syracuse University, 1990.


Ballard-Reisch, Deborah, Kansas Health Foundation Distinguished Chair in Strategic Communication and Professor, Elliott School of Communication (2006). BA, Bowling Green State University, 1979; MA, The Ohio State University, 1988; PhD, Bowling Green State University, 1983.

Banke, Andrea, Assistant Professor, School of Music (2009). BM, The Eastman School of Music, 1995; MM, University of Minnesota School of Music, 1998.

Bann, James Gerald, Assistant Professor, Chemistry (2004). BS, Fort Lewis College, 1993; PhD, Oregon Health Science University, 2000.


Barat, Mehmet, Associate Professor and Barton Fellow, Finance, Real Estate, and Decision Sciences (2000). BS, Istanbul Technical University, 1988; MS, 1991; PhD, Clemson University, 1999.


Bees, Julie I., Professor, School of Music (1986). BM, Peabody Conservatory, 1974; DMA, University of Colorado, Boulder, 1982.

Beggs, Donald L., President and Professor of Education (1999). BSE, Southern Illinois University, 1963; MEd, 1964; PhD, University of Iowa, 1966.


Berman, Nancy, Associate Professor and Chairperson, Management (1980). BA, Wichita State University, 1969; MBA, 1974; PhD, University of Minnesota, 1983.

Bertin, Elaine D., Professor, School of Music (1992). BME, Wichita State University, 1976; MME, 1978; PhD, Communicative Disorders and Sciences, Wichita State University, 1993.

Billings, Dorothy K., Professor, Anthropology (1968). BA, University of Wisconsin, 1955; PhD, University of Sydney, 1972.

Birger, Michael Lee, Associate Professor and Director of the School of Community Affairs, and Graduate Coordinator, Criminal Justice, (1996). BS, Wichita State University, 1982; MA, 1994; EdD, Oklahoma State University, 2000.

Bischoff, William, Professor, Geology, and Dean, Fairmount College of Liberal Arts and Sciences (1984). BA, DePauw University, 1979; MS, Northwestern University, 1982; PhD, 1985.

Blakeslee, Donald J., Professor, Anthropology (1976). BA, University of Nebraska, 1969; MA, 1971; PhD, University of Wisconsin-Milwaukee, 1975.

Bohn, Catherine, Assistant Professor, Counseling, Educational, and School Psychology (2007). BA, University of Notre Dame, 2002; MA, University of Minnesota, 2005; PhD, 2007.

Bolin, Brien L., Associate Professor and Graduate Coordinator, School of Social Work (1999). BS, Oklahoma State University, 1985; MS, 1988; MSW, Walla Walla College, 1998; PhD, Oklahoma State University, 1994.

Bousfield, George R., Professor, Biological Sciences (1991). BS, Saginaw Valley State University, 1974; MA, Indiana University, 1976, PhD, 1981.

Brady, Stephen W., Associate Professor, Mathematics and Statistics, and College Algebra Program Director (1967). AB, Indiana University, 1963; AM, 1965; PhD, 1968.

Barto-Elinzondo, Pedro, Professor, Modern and Classical Languages and Literatures (1975). Universidad Tecnica del Estado, Chile, 1957; MA, Education, Catholic University, Valparaiso, Chile, 1964; MA, University of Iowa, 1971; PhD, 1974.

Brooks, Christopher K., Associate Professor, English (1989). BA, Indiana University, 1977; MA, Indiana State University, 1979; PhD, Purdue University, 1987.

Brown, Karen Lee, Associate Professor and Graduate Coordinator, Biological Sciences (1982). BA, Miami University-Oxford, Ohio, 1974; MS, 1976; PhD, University of Georgia, 1981.

Bryant, Jeffrey J., Professor, School of Accountancy, and BKD Faculty Fellow (1993). BBA, Wichita State University, 1977; JD, Washburn University School of Law, 1980; PhD, Texas Tech University, 1994.

Bubp, Robert, Associate Professor, School of Art and Design (2002). BFA, University of Georgia, 1993; MFA, Georgia State University, 2002.

Bukhgeym, Alexander, Professor, Mathematics and Statistics (2002). MSc, Novosibirsk State University, 1971; PhD, Russian Academy of Sciences, 1984.


Burns, Dennis H., Professor and Graduate Coordinator, Chemistry (1989). BS, University of California-Los Angeles, 1981; PhD, University of California-Davis, 1986.
Carroll, Jeri A., Professor and Graduate Coordinator, Curriculum and Instruction (1982). BME, University of Kansas, 1965; MS, 1973; PhD, 1980.

Carruthers, Silvia Herzog, Associate Professor, Music History/Literature (1997). BA, Northeastern Illinois University, 1977; MA, University of Southern California, 1989; PhD, 1996.

Carter, John W., Associate Professor, Physical Therapy (1990). BS, Southern Nazarene University, 1968; MS, Trinity University, 1972; PhD, University of Texas Medical School-San Antonio, 1975.

Chaparro, Alex, Professor, Psychology (1996). BS, Florida Institute of Technology, Melbourne, 1984; PhD, Texas Tech University, 1990.

Chaparro, Barbara, Assistant Professor, Psychology (1998). BS, University of Richmond, Virginia, 1985; PhD, Texas Tech University, 1990.

Cheng, Jen-Chi, Associate Professor and Chairperson, Economics (1989). BA, National Chengchi University, 1978; MA, National Taiwan University, 1982; PhD, Vanderbilt University, 1989.


Chopra, Dharam V., Professor, Mathematics and Statistics (1967). BA, Punjab University, India, 1950; MA, 1953; MA, University of Michigan, 1961; AM, 1963; PhD, University of Nebraska, 1968.

Christ, Ronald, Professor and Graduate Coordinator, School of Art and Design (1976). BFA, Kansas City Art Institute, 1972; MFA, Indiana University, 1974.

Clark, Frances L., Associate Professor, Curriculum and Instruction (1992). BA, Southwestern College, 1966; MSEd, University of Kansas, 1971; PhD, 1981.

Clark, James E., Associate Professor, Economics and Associate Dean, W. Frank Barton School of Business (1976). BA, Michigan State University, 1969; MA, Northwestern University, 1971; PhD, 1976.

Claycomb, Vincentia (Cindy) A., Professor, Marketing and Entrepreneurship and Neff Family Fellow in Business (1994). BBA, Wichita State University, 1979; MBA, 1991; PhD, Oklahoma State University, 1995.


Cohen, Peter A., Professor, Psychology and Public Health Sciences, and Dean, College of Health Professions (1999). AB, University of California-Berkeley, 1973; MA, San Diego State University, 1976; PhD, University of Michigan, 1980.

Consiglio, Catherine A., Associate Professor, School of Music (1990). BA, Wichita State University, 1979; MA, New England Conservatory, 1983.


Cromwell, Paul, Professor, School of Community Affairs, Criminal Justice Program (1996). BA, State University of New York, 1966; MA, 1967; MPA, Texas Christian University, 1979; PhD, Florida State University, 1986.

Crum, Dorothy E., Professor, School of Music (1973). BA, Barrington College, 1966; MM, Western Kentucky University, 1969; DMA, University of Colorado, 1977.

D’Souza, Francis, Professor, Chemistry (1994). BS, University of Mysore, India, 1982; MS, 1984; PhD, Indian Institute of Science, India, 1991.


Davis, Lynne, Associate Professor, School of Music, and Ann and Dennis Ross Endowed Faculty of Distinction in Organ (2006). BM, University of Michigan, Ann Arbor, 1971.

Daw, Margaret Baughman, Associate Professor, English (1993). BA, University of Virginia, 1979; MS, Northwestern University, Evanston, 1980; MFA, City University of New York, Brooklyn College, 1989.

DeFrain, Darren, Associate Professor and Writing Program Director, English (2005). BA and BS, University of Utah, 1989; MA, Kansas State University, 1992; MFA, Southwest Texas State University, 1995; PhD, Western Michigan University, 2000.

Dehner, George, Assistant Professor, History (2004). BS, Temple University, 1992; MA, University of Denver 1999; PhD, Northeastern University, 2001.


delSilla, Dharma, Professor, International Business and Management, Rudd Foundation Fellow, and Director of the Center for International Business Advancement (1976). BA and BS, University of Evansville, 1957; MS, Illinois University, 1959; PhD, Indiana University, Bloomington, 1966.

DiLollo, Anthony, Associate Professor, Communication Sciences and Disorders (2003). BS, University of Western Australia, 1986; MS, University of Mississippi, 1996; PhD, University of Memphis, 2001.

Ding, Yanwu, Assistant Professor, Electrical and Computer Engineering (2008). BE, Southwest Jiaotong University, 1985; MS, Northern Jiaotong University, 1989; MS, McMaster University, 2001; PhD, 2007.

Dooley, Patricia, Elliott Professor of Communication and Graduate Coordinator, Elliott School of Communication (1997). BA, University of Minnesota, 1975; MA, 1993; PhD, 1994.


Dreifort, John E., Professor and Graduate Coordinator, History (1970). BS, Bowling Green State University, 1963; MA, 1966; PhD, Kent State University, 1970.

Driessen, Brian J., Associate Professor, Mechanical Engineering (2004). BS, Louisiana Technical University, 1991; MS, Georgia Institute of Technology, 1993; PhD, 1996.


Elder, Betty, Associate Professor, Nursing (2003). BA, Wichita State University, 1974; BSN, University of Missouri-KC, 1999; MS, University of Nebraska-Omaha, 2001.


Engber, Kimberly, Assistant Professor, English (2007). BA, Kenyon College, 1993; MPhil, The Graduate Center, City University of New York, 2000; PhD, 2003.

English, Douglas S., Assistant Professor, Chemistry (2008). BS, University of Missouri at Kansas City, 1993; PhD, Iowa State University, 1998.

Farrer, Steven M., Professor, Management and Barton Distinguished Chair in Business (1999). BS, Tulane University, 1978; MA, Southern Methodist University, 1980; MS, Georgia Institute of Technology, 1991; PhD, 1993.


Ferguson, Jason W., Associate Professor, Physics and Faculty Coordinator, High Performance Computing Center (2000). BS, Wichita State University, 1990; MS, 1992; PhD, University of Kentucky, 1997.

Foley, Mark, Associate Professor and Graduate Coordinator, School of Music (1989). BM, University of Minnesota, 1984; MM, Eastman School of Music, University of Rochester, 1989.

Foster, Mary Sue, Professor, School of Art and Design (1966). BAE, University of Kansas, 1961; MSE, 1963; MFA, 1971.

Fox, Charles, Associate Dean and Associate Professor, College of Health Professions (2003). PhD, Brandeis University, 1986.


Gaunt, Philip, Professor, Elliott School of Communication (1990). BA, Reading University, UK., 1959; MA, Indiana University, 1988; PhD, 1989.

Gibson, Kay, Associate Professor, Curriculum and Instruction (1998). BA, Wichita State University, 1970; MS, 1984; PhD, University of New England, 1996.

Glaser, Mark A., Professor, Hugo Wall School of Public and Urban Affairs (1994). BBA, Wichita State University, 1970; MUA, 1974; PhD, University of Texas-Arlington, 1981.


Goldberg, Lyn, Associate Professor, Communication Sciences and Disorders (2008). BS, Lincoln Institute, 1972; MA, Western Michigan University, 1975; PhD, Wayne State University, 1995.


Griffith, Jean, Assistant Professor, English (2007). BA, Boston College, 1993; MA, Temple University, 1996; PhD, Texas A & M University, 2003.


Gythiel, Anthony P., Professor, History (1971). Diplome d'Humanites, St. Stanislas Popergne, Belgium, 1950; BPh, Maison de Philosophie, Belgium, 1953; MA in Theology, Maison de Theologie, Universite de Louvain, Belgium, 1957; MA, University of Detroit, 1966; PhD, 1971.

Hale, LaDonna S., Associate Professor and Assistant Director, Physician Assistant (1998). BS, University of Kansas, 1995; PharmD, 1996.

Hall, Michael, Assistant Professor, Political Science (2009). BA, University of Pittsburgh, 1991; MPA, 1993; PhD, University of California—Santa Barbara, 2002.

Hamdeh, Hussein, Professor, Physics (1989). BS, Lebanese University, 1978; MS, Northeastern University, 1980; PhD, 1986.

Harrison, Paul H., Dene Heskett Chair, Director, and Professor, School of Accountancy (2000). BM, Kansas State University, 1976; MBA, 1977; PhD, Arizona State University, 1982.


Hawley, Donna J., Professor, School of Nursing and Director, Institutional Research, Division of Academic Affairs and Research (1981). BSN, University of Iowa 1968; MA, University of Missouri at Kansas City, 1971; MN, University of Kansas, 1980; EdD, 1980.

Hayes, Judith L., Assistant Professor, Curriculum and Instruction and Director, Transition to Teaching (2005). BS, Friends University, 1995; MEd, Wichita State University, 1997; PhD, Kansas State University, 2004.

Headley, Dean, Associate Professor, Marketing and Entrepreneurship (1988). BSB, Emporia State University, 1970; MPH, University of Oklahoma, 1974; MBA, Wichita State University, 1982; PhD, Oklahoma State University, 1989.

Hendry, William J. III, Professor and Chairperson, Biological Sciences (1992). BA, Northeastern University, 1974; MA, 1978; PhD, Clark University, 1982.


Hersch, Philip L., Professor, Barton Fellow, and Graduate Coordinator, Economics (1983). BA, Queens College, 1974; MA, Ohio State University, 1978; PhD, 1982.

Hersfield, Jeffrey, Associate Professor, Philosophy (1999). BA, University of British Columbia, 1982; MA, University of Arizona, 1985; PhD, 1992.

Hertzog, Jodie, Associate Professor, Sociology (2003). BS, Grand Valley State University, 1994; MA, Western Michigan University, 1997; PhD, Purdue University, 2003.

Hill, Twyla J., Associate Professor and Graduate Coordinator, Sociology (1998). BA, California State University, 1986; MA, University of California-Irvine, 1993; PhD, 1998.

Ho, James C., Distinguished Professor, Physics and Chemistry, and Senior Staff Scientist, National Institute for Aviation Research (1971). BS, National Taiwan University 1959; MS, University of California at Berkeley, 1963; PhD, 1966.

Hodson, Barbara, Professor and PhD program Graduate Coordinator, Communication Sciences and Disorders (1989). BS, University of Illinois, 1958; MS, 1960; PhD, 1975.

Hoffmann, Klaus A., Marvin J. Gordon Distinguished Professor, and Graduate Coordinator of the PhD program, Aerospace Engineering (1990). BS, University of Texas at Austin; 1972; MS, 1975; PhD, 1983.


Houseman, Greg, Assistant Professor, Biological Sciences (2009). BA, Cornerstone University, 1990; MS, Illinois State University, 1998; PhD, Michigan State University, 2004.

Hu, Xiaomi, Associate Professor, Mathematics and Statistics (1994). BS, Jiangxi Polytechnic University, China, 1982; PhD, University of Missouri-Columbia, 1993.

Huckstadt, Alicia A., Professor and Director of Graduate Program, School of Nursing (1975). BSN, Wichita State University, 1975; MN, 1978; PhD, Kansas State University, 1981; PhD, University of Colorado, 1990.

Hughes, David T., Associate Professor and Graduate Coordinator, Anthropology (1988). BS, West Texas State University, 1973; MA, University of Arkansas, 1977; PhD, University of Oklahoma, 1988.

Hull, Raymond H., Professor, Communication Sciences and Disorders, and Graduate Coordinator, Audiology (1993). BA, McPherson College, 1964; MA, University of South Dakota, 1965; PhD, University of Denver, 1972.


Huxman, Susan M., Associate Professor and Director, Elliott School of Communication (1990). BA, Bethel College, 1982; MA, University of Kansas, 1986; PhD, 1988.

Iorio, Sharon H., Dean, College of Education and Professor, Elliott School of Communication (1990). BA, University of Oklahoma, 1965; MS, Oklahoma State University, 1984; PhD, 1991.
McDonald, J. David, Associate Provost for Research, Division of Academic Affairs and Research; Dean of the Graduate School, and Professor, Biological Sciences (1992). BS, Kansas State University, 1983; PhD, 1988.

McDowell, Kimberly D., Assistant Professor, Curriculum and Instruction (2005). BA, Wichita State University, 1994; MA, Wichita State University, 2000; PhD, Florida State University, 2004.


Meissen, Gregory J., Professor, Psychology (1980). BA, Wichita State University, 1977; PhD, University of Tennessee, 1980.

Meler, Monika, Assistant Professor, School of Art and Design (2008). BFA, Milwaukee Institute of Art and Design, 2003; MA, Purdue University, 2005; MFA, Tyler School of Art, Temple University, 2007.

Merkle, Edgar, Assistant Professor, Psychology (2007). BA, Ohio University, 2000; MA, 2003; MS, Ohio State University, 2004; PhD, 2005.

Miles, William, Associate Professor, Economics (1999). BS, Bentley College, 1993; PhD, University of Illinois at Urbana-Champaign, 1999.

Miller, Gary L., Provost and Vice President, Division of Academic Affairs and Research, and Professor, Biological Sciences (2006). BS, College of William and Mary, 1976; MA, 1979; PhD, Mississippi State University, 1982.

Miller, Josephine, Associate Professor, School of Music (2005). BME, Ohio State University, 1972; PhD, University of Nebraska, 2005.


Miller, Rodney E., Professor, School of Music and Dance, College of Fine Arts (2004). BM, West Texas State University, 1974; MM, Indiana University, 1977; PhD, Illinois State University, Normal, 1988.

Minaie, Bob, Associate Professor, Mechanical Engineering (2005). MS, Iowa State University, 1980; PhD, University of Minnesota, 1990.


Mitchell, Linda, Professor, Curriculum and Instruction and Graduate Coordinator, Special Education Program (1997). BA, Wichita State University, 1986; MA, 1990; PhD, University of Kansas, 1997.


Muma, Richard D., Professor and Chairperson, Public Health Sciences (1994). BS, University of Texas Medical Branch-Galveston, 1987; MPH, University of Texas Health Science Center-Houston, 1993; PhD, University of Missouri at St. Louis, 2004.

Muthitacharoen, Achita, Associate Professor, Finance, Real Estate, and Decision Science (2002). BA, Thammasat University, 1994; MBA, University of Memphis, 1997; PhD, 2002.

Myers, Eunice D., Associate Professor, Modern and Classical Languages and Literatures, and Associate Dean, Fairmont College of Liberal Arts and Sciences (1981). BA, University of North Carolina-Chapel Hill, 1971; MA, 1973; PhD, 1977.


Nagati, M. Gawad, Associate Professor, Aerospace Engineering (1984). BS, Cairo University, Egypt, 1966; MS, Wichita State University, 1975; PhD, Iowa State University, 1984.

Namboodiripad, Vinod, Assistant Professor, Electrical and Computer Engineering (2008). BE, Gujarat University, 2000; MS, University of North Carolina, Charlotte, 2003; PhD, University of Massachusetts, Amherst, 2008.

Nance, Donald W., Associate Professor, Psychology, and Executive Director, Training and Technology Team (1968). BA, University of Redlands, 1964; MA, University of Iowa, 1967; PhD, 1968.


Okafor, Chinyere, Professor, Women's Studies (2003). BA, University of Nigeria, 1975; MA, University of Sussex, 1979; PhD, University of Nigeria, 1989.


Palmiotto, Michael, Professor, School of Community Affairs, Criminal Justice Program (1994). BS, Mercy College, 1971; MS, City University of New York, 1974; PhD, University of Pittsburgh, 1980.


Parcell, William C., Associate Professor and Berg Fellow, Geology, and Graduate Coordinator, EEPS program (2001). BS, University of the South, 1994; MS, University of Delaware, 1997; PhD, University of Alabama, 2000.


Patterson, Jean, Associate Professor and EdD program Graduate Coordinator, and Chairperson, Educational Leadership (1999). BS, Florida State University, 1976; MA, Ball State University, 1981; EdD, University of North Carolina-Chapel Hill, 1997.

Patterson, Jeremy A., Assistant Professor, Human Performance Studies, and Director of Human Performance Laboratory (2005). BS, Linfield College, 1995; Graduate Diploma, Victoria University, 1997; MAS, 2002; PhD, 2004.

Peikowski, Jodi, Associate Professor, Economics and Barton Fellow (2002). BA, Coe College, 1995; MS University of Kentucky, 1999; PhD, 2000.

Pendse, Ravindra, Associate Provost and Chief Information Officer, Division of Academic Affairs and Research, Professor, Electrical and Computer Engineering, Interim Dean, University Libraries, and CISCO Fellow (1994). BSEE, Osmania University, India, 1982; MSEE, Wichita State University, 1985; PhD, 1994.

Perlino, Martin M., Professor, Economics and Bloomfield Foundation Faculty Fellow in Business (1965). BA, Arizona State University, 1960; MA, Ohio State University, 1962; PhD, 1965.

Pett, Timothy L., Associate Professor, Management, and Director, Center for Entrepreneurship, (1996). BA, Saint Leo College,
1989; MBA, University of Memphis, 1992; PhD, 1998.


Pickus, Keith, Associate Provost, Division of Academic Affairs and Research; Professor, University, 1976; PhD, 1982.

Pitetti, Kenneth H., Professor, Physical Therapy (1987). BS, University of San Francisco 1968; MS, F. Hays State University, 1980; PhD, University of Texas Health Science Center Dallas, 1986.

Popp, Harold A., Professor, School of Music (1993). BME, Ottawa University, 1959; MM, Indiana University, 1960; MFA, University of Iowa, 1967; PhD, 1969; MHL (Honorary Degree), Ottawa University, 1979.

Porter, Stephen S., Associate Professor and Chairperson, Marketing and Entrepreneurship, and Moore Faculty Fellow in Business (1995). BS, Friends University, 1976; MBA, Wichita State University, 1982; PhD, Oklahoma State University, 1994.

Price, Jay M., Associate Professor, History (1999). BA, University of Mexico, 1991; MA, College of William and Mary, 1992; PhD, Arizona State University, 1997.

Quirin, Jeffrey J., Associate Professor and Barton Distinguished Chair in Business, School of Accountancy (2000). BS, Pitsburg State University, 1994; MBA, 1995; PhD, University of Nebraska-Lincoln, 1998.


Reding, Kurt, Assistant Professor and Grant Thornton Faculty Fellow, School of Accountancy (2008). BS, Trinity Christian College, 1977; MS, Northern Illinois University, 1979; PhD, The University of Tennessee, 1988.


Rimington, Glyn M., Boeing Professor of Global Learning, College of Education (2001). BS, University of Queensland, 1980; PhD, 1986.

Riordan, Janice, Professor, School of Nursing (1993). Diploma in Nursing, Evangelical Deaconess Hospital, 1955; BS, Kansas Newman College, 1976; MN, Wichita State University, 1979; EdD, Oklahoma State University, 1987.

Rogers, Christopher M., Associate Professor, Biological Sciences (2001). BS, University of Wisconsin-Milwaukee, 1978; MS, Michigan State University, 1982; PhD, Indiana University-Bloomington, 1988.

Rogers, Michael E., Professor, Graduate Coordinator, and Chairperson, Department of Human Performance Studies (1998). BS, Mount Union College, 1991; PhD, Kent State University, 1996.

Rokhasz, Kamran, Associate Dean, College of Engineering, Professor, and Graduate Coordinator, MS program, Aerospace Engineering (1991). BS, University of Missouri-Rolla, 1978; MS, 1980; PhD, 1988.

Roush, Dean, Professor, School of Music (1988). BFA, Ohio University, 1973; MM, Bowling Green State University, 1975; DMA, Ohio State University, 1985.

Roussel, Brigitte, Associate Professor, Modern and Classical Languages and Literatures (1990). BA, University of La Sorbonne, 1976; MA, 1981; PhD, University of Kansas, 1991.


Russell, F. Leland, Assistant Professor, Biological Sciences (2005). BA, Carleton College, 1992; PhD, University of Texas at Austin, 1999.

Saeed, Khawaja, Associate Professor, Finance, Real Estate, and Decisions Sciences (2004). MBA, Punjab College of Business Administration, 1993; MBA, Asian Institute of Technology, 1995; PhD, University of South Carolina, 2004.

Schener, Julie, Associate Professor and Master's program Graduate Coordinator, Communication Sciences and Disorders (1998). BA, Wichita State University, 1969; MA, 1971; PhD, 1989.

Schneegurt, Mark A., Associate Professor, Biological Sciences (2000). BS, Rensselaer Polytechnic Institute, 1984; MS, 1985; PhD, Brown University, 1989.


Scudder, Rosalind R., Professor, Communication Sciences and Disorders (1972). BA, Wichita State University, 1964; MA, 1972; PhD, 1978.

Self, Patricia L., Assistant Professor, Communication Sciences and Disorders (1994). BA, Wichita State University, 1984; MA, 1985; PhD, 1991.

Shaffer, Victoria, Assistant Professor, Psychology (2005). BA, West Chester University, 2000; MA, The Ohio State University, 2002; PhD, 2005.


Shaw, Carolyn M., Associate Professor and Chairperson, Political Science (2001). BA, Dickinson College, 1991; PhD, University of Texas-Austin, 2000.


Shuai, Bin, Assistant Professor, Biological Sciences (2005). BS, Nanjing University, 1993; MS, 1996; PhD, University of California-Riverside, 2003.


Smith, Martha, Associate Professor, School of Community Affairs, Criminal Justice Program (2002). AB, Brown University, 1978; JD, New York University, 1981; MA, Rutgers University, 1995; PhD, 1996.

Smith, Nicholas E., Professor, School of Music (1975). BM, Pittsburgh State University, 1970; MM, Eastman School of Music, 1972; DMA, 1980.


Smith-Campbell, Betty, Associate Professor, School of Nursing (1998). Nursing Diploma, Hurley Medical Center School of Nursing, 1975; BSN, University of Michigan, 1980; MN, University of Kansas, 1987; PhD, University of Colorado, 1996.


Soles, David E., Professor and Chairperson, Philosophy; Director, MA in Liberal


Steck, James E., Professor, Aerospace Engineering (1990). BS, University of Missouri at Rolla, 1988; MS, 1984; PhD, 1989.

Steinke, Elaine, Professor, School of Nursing (1990). BSN, Wichita State University, 1979; MN, 1982; PhD, Kansas State University, 1987.


Sulyok, Levente, Assistant Professor, School of Art and Design (2007). BA, University of California at Berkeley, 2003; MFA, Rhode Island School of Design, 2006.


Talaty, Erach R., Professor and Assistant Chairperson, Chemistry (1969). BSC (Hons.), Nagpur University, India, 1948; PhD, 1954; PhD, Ohio State University, 1957.

Tang, Bin, Assistant Professor, Electrical and Computer Engineering (2007). BS, Peking University, 1997; MS, Stony Brook University, 2000; MS, 2002; PhD, 2007.

Thrane, Lisa, Assistant Professor, Sociology (2009). BA, Simpson College, 1995; MS, Iowa State University, 1999; PhD, 2003.


Toops, Gary H., Professor, Modern and Classical Languages and Literatures (1989). BA, Mc Gill University, 1975; MA, University of British Columbia, 1979; MA, Yale University, 1980; MPhil, 1982; PhD, 1985.

Torbenson, Craig L., Associate Professor, History (1989). BS, Brigham Young University, 1982; MA, 1985; PhD, University of Oklahoma, 1992.


Tran, Anh, Associate Professor, Curriculum and Instruction (2003). BA, Saigon University, 1973; MA, Wichita State University, 1993; PhD, Kansas State University, 2002.

Treichak, Andrew, Jr., Associate Professor, School of Music (1980). BM, Oberlin Conservatory, 1973; MM, State University of New York-Stormy Brook, 1975; DMA, University of Texas-Austin, 1988.


Van Spipdonk, Michael J., Associate Professor, Chemistry (2000). BA, University of Detroit, 1989; PhD, Texas A&M University, 1994.

Vanderburgh, William L., Associate Professor, Philosophy; Director, Center for Teaching and Research Excellence (2001). BA (Hons), University of Western Ontario, 1993; MA, 1994; PhD, 2001.

Waters, Mary Ann, Associate Professor and Graduate Coordinator, English (2004). BA, Millersville University of Pennsylvania, 1979; MA, San Francisco State University, 1994; PhD, University of California, Davis, 2001.


Weheba, Gamal S., Associate Professor, Industrial and Manufacturing Engineering (2000). BS, Menoufia University, 1981; MS, 1987; PhD, University of Central Florida, 1996.

Whitman, Lawrence E., Associate Professor, Industrial and Manufacturing Engineering, and Director of Engineering Education, College of Engineering (1999). BSET, Oklahoma State University, 1984; MSIEM, 1986; PhD, University of Texas-Arlington, 1999.

Widener, Russell D., Professor and Associate Director, School of Music (1981). BM, Baylor University, 1968; MM, Catholic University, 1972.


Wine, Thomas R., Professor and Director of Choirs, School of Music (1995). BAME, Alderson-Broadlands College, Philippines, 1980; MME, Duquesne University, 1982; PhD, Florida State University, 1994.


Wong, John D., Professor and Interim Director, Hugo Wall School of Urban and Public Affairs (1990). BBA, Wichita State University, 1982; MA, 1984; JD, Washburn University, 1986; PhD, Northeastern University, 1990.

Woods, Dexter, Director of Advanced Education in General Dentistry program, Associate Professor, Public Health Sciences (2009). BS, Tuskegee University, 1992; DDS, Howard University College of Dentistry, 1996.


Wright, David W., Statistical Project Analyst, Division of Academic Affairs and Research; Professor, Sociology, (1993). BA, Indiana University-Purdue University at Indianapolis, 1987; MA, Purdue University, 1989; PhD, 1992.

Yang, C. Charles, Professor, Mechanical Engineering (1997). BS, National Taiwan University, 1983; MS 1987; PhD, Louisiana State University, 1993. Licensed Professional Engineer-Louisiana.

Yang, Wan, Associate Professor and Chairperson, Geology (1999). BS, Northwestern University, China 1984; MS, California State University at Fresno, 1990; PhD, University of Texas at Austin, 1995.

Yeager, Samuel J. III, Professor, Hugo Wall School of Urban and Public Affairs, and Graduate Coordinator, Public Administration (1976). BA, University of Massachusetts, 1967; MLS, George Peabody College, 1968; MS, Troy State University, 1971; MPA, Auburn University, 1972; DPA, University of Georgia, 1976.

Yildirim, Mehmet, Associate Professor, Industrial and Manufacturing Engineering (2002). BS, Bogazici University, 1994; MS,
Bilbott, University, 1996; PhD, University of Florida, 2001.

Zandler, Melvin E., Professor, Chemistry (1966). BA, Friends University, 1960; MS, Wichita State University, 1963; PhD, Arizona State University, 1965.


Zoller, Peter T., Associate Professor, English (1973). BA, University of San Francisco, 1965; MA, Claremont Graduate School, 1966; PhD, 1970.

**Associate Membership**


Ackerman, Paul D., Assistant Professor and Assistant Chairperson, Psychology (1968). BA, University of Kansas, 1964; MA, 1966; PhD, 1968.

Akrabova, Maria G., Assistant Professor and Graduate Coordinator, Modern and Classical Languages (2003). MA, Sofia University, Bulgaria, 1995; PhD, University of Kansas, 2004.

Anderson, Peggy J., Associate Professor, Curriculum and Instruction (1993). BS, Emporia State University, 1967; MA, University of Kansas, 1979; PhD, Wichita State University, 1993.

Babich, Judith, Professor, School of Performing Arts (1984). BA, Edgewood College, 1974; MA, University of Cincinnati, 1976; PhD, University of California, 1981.

Bagai, Rajiv, Associate Professor, Electrical and Computer Engineering (1990). MS, Birla Institute of Technology and Science, 1983; MS, University of Victoria, 1987; PhD, 1990.


Baker, C. Edward, Assistant Professor and Technical Director, School of Performing Arts (2005). BA, Wichita State University, 1988; MFA, Ohio University, 1991.

Bennett, Jo, Assistant Professor, Educational Leadership (2008). BA, University of Texas at Austin, 1972; MA, 1983; PhD, 2008.

Bergman, Daniel, Assistant Professor, Curriculum and Instruction (2007). BS, University of Nebraska - Lincoln, 1999; MA, 2002; MA University of Nebraska - Kearney, 2004; PhD, Iowa State University, 2007.

Boehme, Rodney, Assistant Professor and Barton Fellow, Finance, Real Estate, and Decision Sciences (2004). BA, Texas A & M, 1984; MBA, Baylor University, 1993; PhD, University of Houston, 1998.

Bohlien, Ruth, Director of CPAA and Instructor, Human Performance Studies (2008). BAE, Wichita State University, 1996; MEd, 1998; PhD, Oklahoma State University, 2008.


Chang, Doris, Associate Professor, Women's Studies (2003). BA, University of North Carolina-Charlotte, 1992; MA, Bowling Green State University, 1994; PhD, Ohio State University, 2002.

Close, Dan E., Associate Professor, Elliott School of Communication (1990). BA, Wichita State University, 1981; MA, 1993.

Cochran-Black, Diana L., Assistant Professor, Medical Technology (1987). BS, Emporia State University, 1979; MHS, Wichita State University, 1986; DrPh, University of Oklahoma, 1998.

Dister, Donald A., Associate Professor, Biological Sciences (1963). BA, University of Louisville, 1952; MS, 1958; PhD, University of Kansas, 1966.


Duncan, Donald, Assistant Professor, School of Music (2006). MM, Arizona State University, 1993.

Dwyer, Jesse, Associate Professor, School of Accountancy (2002). BS, University of Connecticut, 2001; MS, 2002.


Gries, John C., Associate Professor, Geology (1971). BS, University of Wyoming, 1962; MS, 1965; PhD, University of Texas, 1970.


Hager, Kevin, Associate Professor, Elliott School of Communication (1998). BA, Fort Hays State University, 1982; MS, 1983.


Ho, Lop-Hing, Associate Professor, Mathematics and Statistics (1989). BA, Chinese University of Hong Kong, 1979; MA, Princeton University, 1982; PhD, 1984.

Iacovetta, Ronald G., Associate Professor, School of Community Affairs, Criminal Justice Program (1973). BS, Colorado State University, 1965; MS, 1967; PhD, University of Connecticut, 1972.


Jones, Bret, Associate Professor and Program Director of Theatre, School of Performing Arts (2009). BA, East Central University, 1991; MA, University of Oklahoma, 1993; PhD, 2003.

Kearney, Linwood, Assistant Professor, School of Accountancy (2008). BSBA, East Carolina University, 1987; MBA, 1993; MAcc, North Carolina State University, 1996; ABD, Florida State University.

Koert, David N., Associate Professor, Mechanical Engineering (1993). BSME, Vilanova University, 1980; MSME, Drexel University, 1984; PhD, 1990.

Lause, Timothy, Assistant Professor, School of Social Work (1978). BS, Central Missouri State University, 1973; MA, 1974; PhD, Saint Louis University, 1981.

Li, Su, Assistant Professor, Sociology (2006). BA, Beijing Normal University, 1997; MA, 2000; MS, Northwestern University, 2002; PhD, 2006.

Liu, Fuchang, Assistant Professor, Curriculum and Instruction (2005). BA, Liaocheng Teacher's College, 1982; MA, Jinlin University, 1987; MEd, University of Louisiana-Monroe, 1995; EdD, 1999.

Loftus, Ariel, Associate Professor, History (1997). BA, University of Michigan, 1979; PhD, Stanford University, 1981; MA, University of Michigan, 1982.


McClendon, Jacque, Assistant Professor, School of Nursing (2008). BN, South Dakota State University, 1970; MN, Wichita State University, 1980; PhD, University of Colorado, 1996.

Meyer, Holger, Assistant Professor, Physics (2009). Vordiplom, Technische Universität Braunschweig, 1994; MS, Virginia Polytechnic Institute and State University, 1997; PhD, 2002.


Neville, David, Assistant Professor and Scenic Lighting Designer, School of Performing Arts (2006). BFA, University of Kansas, 1987.

Nyberg, Sue, Associate Professor, Chairperson, and Director, Physician Assistant program (1988). BHS, Wichita State University, 1981; MHS 1988.


Parham, Douglas, Assistant Professor, Communication Sciences and Disorders (2008). BA, Memphis State University, 1992; MA, University of Memphis, 1996; PhD, 2008.

Pearson, Jennifer, Assistant Professor, Sociology (2009). BA, University of Texas at Austin, 2000; MA, 2003; PhD, 2008.

Perez, Kathleen O., Associate Professor, Sociology (1983). BA, Clarke College, 1979; MA, Miami University, 1980; PhD, Purdue University, 1984.

Powers, Nancy, Assistant Professor and Janice R. Riordan Distinguished Professor in Maternal Child Health, Nursing (2009). BA, Randolph-Macon Woman's College, 1975; MD, University of Virginia School of Medicine, 1979.


Rogers, Nicole, Assistant Professor, School of Community Affairs, Gerontology Program (2007). BS, Mount Union College, 1992; MA, Kent State University, 1994; MEd, University of Texas at Austin, 1999; PhD, Wichita State University, 2003.


Sanatullov, Marat E., Assistant Professor and Teacher Education Coordinator, Modern and Classical Languages and Literatures (2004). License, University of Poitiers, France; Maitrise, 1998; MA, University of Nebraska, 2000.

Shawver, Martha M., Senior Associate Provost for Executive Affairs and Planning, Division of Academic Affairs and Research, and Assistant Professor, Nursing (1975). BSN, Eastern Mennonite College, 1965; MA in Nursing, University of Iowa, 1974; PhD, University of Kansas, 1985.

Sisker, Craig, Assistant Professor and Thornton Faculty Fellow, School of Accountancy (2008). BS, Metropolitan State College of Denver, 2000; PhD, Arizona State University, 2006.

Smith, Royce, Associate Professor, School of Art and Design (2005). AB, Wabash College, 1996; MA, University of Queensland, 1999; MA, Purdue University, 2000; PhD, University of Queensland, 2004.

Starkey, Linda, Associate Professor, School of Music and Associate Director of the Musical Theatre-Opera Programs (1993). BM, University of Kansas, 1968; MM, Fort Hays State University, 1972; MA, Wichita State University, 1997.


Tartaroglu, Semih, Assistant Professor, Finance, Real Estate, and Decision Sciences (2006). BS, Bilkent University, 1998; MS, Texas A & M University, 2002; PhD, 2008.

Teshome, Asrat, Associate Professor, Electrical and Computer Engineering (2003). BS, Addis Ababa University, 1965; BS, 1974; MS, Cornell University, 1976; PhD, 1980.

Thompson, Johnnie, Associate Professor, Curriculum and Instruction (1993). BS, University of Kansas, 1968; MS, Central Missouri State University, 1975; EdD, Kansas State University, 1992.

Vermillion, Mark C., Assistant Professor, Sport Management (2006). BS, Kansas State University, 2000; MA, Wichita State University, 2003; PhD, Oklahoma State University, 2006.

Vijverberg, Chu-Ping C., Assistant Professor, Economics (2006). BA and MA, National Taiwan University; PhD, University of Pittsburgh, 1982; MS, Southern Methodist University, 2000; PhD, 2002.

Violette, Melanie, Assistant Professor, Aerospace Engineering (2008). BS, Massachusetts Institute of Technology, 1989; MS, Rensselaer Polytechnic Institute, 1992; PhD, University of Texas at Austin, 2000.

Walker, Melissa, Associate Professor, Hugo Wall School of Urban and Public Affairs (2006). BA, Northwestern University, 1985; MPA, Harvard University, 1992; PhD, University of Chicago, 2005.

Wells, Candace B., Assistant Professor, Curriculum and Instruction (2004). AB, University of Chicago, 1971; MA, University of Missouri - Kansas City, 1973; EdD, Oklahoma State University, 1980.

Wilson, Camilla, Associate Professor and Chairperson, Physical Therapy (2003). BS, University of Kansas, 1970; MS, 1979; PhD, 1992.

Wineke, Donald R., Associate Professor and Chairperson, English (1971). BA, University of Washington, 1960; MA, Pennsylvania State University, 1962; PhD, Indiana University, 1971.

Wood, Michael A., Assistant Professor, Elliott School of Communication, and Executive Director, Media Resources Center (1985). BS, Kansas State University, 1969; MS, 1973; MFA, University of Southern California, 1979.
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### Campus

Wichita State's 320-acre campus is located in the northeast section of Wichita. It is bounded by 17th Street on the south, 21st Street on the north, Hillside Avenue on the west and Oliver Street on the east. Visitors coming to campus on the Kansas Turnpike should use Exit 50 (East Wichita) or Exit 53 (K-96 Wichita).

### Parking

Visitors to the Wichita State campus should obtain temporary parking permits from the Wichita State University Police Department, 2000 Gentry. This is the building topped by a tall radio tower on the east side of campus. Visitor parking is available in all lots but the reserved lots, which are designated by a red sign with a number at the top.

Students must pay a facilities fee and register their vehicle before parking on campus. This can be done during the registration/payment process, or separately at the University Police Department. The registration decal on hangtag must be properly displayed. Student parking is available in the lots marked on the next page with diagonal stripes.

### Map Legend

Buildings are listed in alphabetical order, and building abbreviations, where they exist, are indicated to the left of the building name. College, student service, and major administrative offices are listed with the building that houses them.

We have tried to indicate buildings where some barriers to handicapped students exist. There is an ongoing program to remove these. Multilevel buildings have an elevator unless otherwise indicated.

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### Map and Building Abbreviations

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### Abbreviations

- A-B: North campus
- C-D: South campus
- E: East campus
- F: West campus
- G: Graduate campus
- H: Off-campus
- I: Interdisciplinary
- J: Joint use
- K: Kansas
- L: Law
- M: Medical
- O: Other
- S: Science
- T: Technical
- U: Undergraduate
- V: Veterinary
- W: West campus
- X: Extended services
- Y: University
- Z: University

The building abbreviations used here may not match those used in other publications.
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Higher Learning Commission of the North Central Association of Colleges and Schools*
Association to Advance Collegiate Schools of Business—Business and Accounting
Accreditation Board of Engineering and Technology
Accreditation Review Commission on Physician Assistant Education
American Chemical Society
American Dental Educators’ Association
American Psychological Association
American Speech-Language and Hearing Association
Commission on Collegiate Nursing Education
Commission on Accreditation in Physical Therapy Education of the American Physical Therapy Association
Commission on Accreditation of Athletic Training Education
Commission on Dental Accreditation of the American Dental Association
Council on Social Work Education
Human Factors and Ergonomics Society
Kansas State Board of Nursing
Kansas State Department of Education
National Accrediting Agency for Clinical Laboratory Sciences
National Association of Schools of Dance
National Association of Schools of Music
National Association of Schools of Public Affairs Administration
National Association of School Psychologists
National Council for Accreditation of Teacher Education
Sport Management Program Council

*Higher Learning Commission of the North Central Association of Colleges and Schools
30 North LaSalle Street, Suite 2400; Chicago, Illinois 60602-2504; (312) 263-0456.
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