Academic Calendar, 2006-2007

Summer Session 2006
April 3-June 2.............................Summer Session Registration
May 22-June 2.............................Presession
May 29.......................................Memorial Day holiday
June 5........................................Classes begin, eight-week term and first four-week term
June 16......................................Final date for filing Application for Degree card in Graduate School Office
July 4........................................Independence Day holiday
July 3........................................Classes begin, second four-week term
July 21 Final date for all degree requirements, excluding current courses, to be met and reported to the Graduate School, including: oral defense, comprehensive exam, incomplete grades, bound thesis*
All departmental requirements must have been met*
July 28.......................................Summer Session ends

Fall Semester 2006
April 10-August 23......................Fall Semester registration
August 17.....................................Classes begin
September 4...............................Labor Day holiday
September 14.............................Final date for filing Application for Degree card in Graduate School Office
October 11.................................Midterm point
October 15-17.............................Fall recess
October 30.................................Final date for withdrawal with nonpenalty grades
November 22-26..........................Thanksgiving recess
December 7...............................Last day of classes
December 8 Final date for all degree requirements, excluding current courses, to be met and reported to the Graduate School, including: oral defense, comprehensive exam, incomplete grades, digital thesis*
All departmental requirements must have been met*
December 8...............................Study day
December 9-15.............................Final examinations
December 10..............................Graduate School Hooding and University Commencement

Spring Semester 2007
November 13-January 22..............Spring Semester registration
January 15.................................Martin Luther King, Jr. Day, holiday
January 16.................................Classes begin
February 12...............................Final date for filing Application for Degree card in Graduate School Office
March 9......................................Midterm point
March 19-25...............................Spring recess
April 2......................................Final date for withdrawal with nonpenalty grades
May 7 Final date for all degree requirements, excluding current courses, to be met and reported to the Graduate School, including: oral defense, comprehensive exam, incomplete grades, digital thesis*
All departmental requirements must have been met*
Last day of classes
May 8......................................Study day
May 9-15.................................Final examinations
May 11-12.................................Commencement

These dates are subject to change.

* Graduate School deadlines to ensure graduation that semester.
Graduate Catalog
2006-2007
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<td>79</td>
<td>Accounting (MACC)</td>
<td>1,100 points using formula of 200 times overall GPA in the last 60 hours plus the GMAT score</td>
</tr>
<tr>
<td>79</td>
<td>Aerospace Engineering</td>
<td>GPA 3.00 last 60 hours; undergraduate degree in engineering or related field</td>
</tr>
<tr>
<td>79</td>
<td>Doctor of Philosophy (PhD)</td>
<td>GPA 3.500 in last 60 hours, GRE (general); master’s degree in engineering or physical science</td>
</tr>
<tr>
<td>79</td>
<td>Anthropology (MA)</td>
<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>79</td>
<td>Art, Studio (MFA)</td>
<td>BFA degree or equivalent; GPA 3.000 in art courses, resume, portfolio (15 color slides); 3 references; statement of philosophy; Options: Ceramics, Painting, Printmaking and Sculpture</td>
</tr>
<tr>
<td>79</td>
<td>Audiology (AuD)</td>
<td>GPA 3.00 last 60 hours; combined score of at least 900 on GRE V&amp;Q and 3.500 on analytic writing, three recommendation letters</td>
</tr>
<tr>
<td>79</td>
<td>Biology (MS)</td>
<td>GRE (general and biology); GPA 3.000 in all UG biology courses; 24 semester hours in biology; 15 semester hours in chemistry; 3 reference letters from science faculty</td>
</tr>
<tr>
<td>88</td>
<td>Business Administration (MBA)</td>
<td>GMAT scores, personal goals statement; 2 reference forms; current resume. Application deadline – June 1 for fall; November 1 for spring</td>
</tr>
<tr>
<td>88</td>
<td>Executive Business Administration</td>
<td>GMAT, Personal essay; letters of recommendation; interview</td>
</tr>
<tr>
<td>79</td>
<td>Chemistry</td>
<td>BS Chemistry (ACS approved or equivalent); GPA 3.000 (overall and in all chemistry courses); general GRE recommended; two recommendation letters; statement of goals and research interests</td>
</tr>
<tr>
<td>100</td>
<td>Communication (MA)</td>
<td>GPA 3.00 over last 60 hours, GRE (general); statement of purpose</td>
</tr>
<tr>
<td>79</td>
<td>Communication Sciences and Disorders</td>
<td>GPA 3.0 last 60 hours and major; GRE (general); undergraduate major of at least 30 credit hours in speech, language, hearing disorders or similar courses; 3 recommendation letters; personal essay, February 1 for summer/fall, October 1 for spring</td>
</tr>
<tr>
<td>79</td>
<td>Doctor of Philosophy (PhD)</td>
<td>GRE (general); departmental application; 3 recommendation letters; letter explaining professional goals related to obtaining PhD; professional resume; GPA at least 3.5 in at last 60 hours</td>
</tr>
<tr>
<td>79</td>
<td>Computer Science (MS)</td>
<td>GPA 3.00 in last 60 hours, two semesters of calculus level I or above, foundation courses</td>
</tr>
<tr>
<td>79</td>
<td>Counseling (MEd)</td>
<td>GPA 3.0 last 60 hours; statement of professional goals; 3 reference letters; resume; 9 undergraduate hours in psychology and 6 additional hours in behavioral sciences</td>
</tr>
<tr>
<td>100</td>
<td>Creative Writing (MFA)</td>
<td>GPA 3.0 in English courses; 24 hours of relevant courses. Fiction option will require 20 pages of original writing; Poetry option will require 4-6 original poems</td>
</tr>
<tr>
<td>79</td>
<td>Criminal Justice (MA)</td>
<td>GPA 3.000 last 60 hours; autobiographical statement of interests and goals; GRE (verbal and quantitative) 3 reference letters. Fall admission only</td>
</tr>
<tr>
<td>79</td>
<td>Curriculum and Instruction (MEd)</td>
<td>Be a 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 3.00 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>
</tr>
<tr>
<td>79</td>
<td>Earth, Environmental, and Physical Sciences</td>
<td>Bachelor’s degree in any field of natural sciences, or acceptable coursework in natural sciences.</td>
</tr>
<tr>
<td>79</td>
<td>Economics (MA)</td>
<td>GPA 2.750 in all economic courses and required mathematics</td>
</tr>
<tr>
<td>79</td>
<td>Educational Leadership</td>
<td>GPA 3.000, 3 reference forms; resume; 1 year full-time teaching experience in an accredited school; mentor support letter; goals statement</td>
</tr>
<tr>
<td>79</td>
<td>Doctor of Education (EdD)</td>
<td>GPA 3.500 all graduate hours; GRE (general); graduate work equivalent to master's degree in education; completion of coursework for district leadership license, 3 years of accredited experience in an educational organization, 3 recommendations; resume; goals statement. November 1 deadline for following summer</td>
</tr>
<tr>
<td>79</td>
<td>Educational Psychology (MEd)</td>
<td>GRE (V, Q, and writing), resume; 3 references; statement of goals and research interests</td>
</tr>
<tr>
<td>79</td>
<td>Electrical Engineering</td>
<td>GPA 3.000 in last 60 hours; Undergraduate major in electrical engineering or equivalent GPA 3.500 last 60 hours; GRE, master's degree in engineering or physical science</td>
</tr>
<tr>
<td>79</td>
<td>Engineering Management (MEM)</td>
<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 data base software, GRE may be required</td>
</tr>
<tr>
<td>100</td>
<td>English (MA)</td>
<td>GPA 3.000 in English courses; 24 hours of relevant English courses</td>
</tr>
<tr>
<td>TOEFL</td>
<td>Programs</td>
<td>Departmental application requirements</td>
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</tr>
<tr>
<td>88</td>
<td>Gerontology (MA)</td>
<td>GPA 3.000 last 60 hours; names of 3 references</td>
</tr>
<tr>
<td>100</td>
<td>History (MA)</td>
<td>GPA 3.000 in all history courses; Undergraduate major in history or equivalent</td>
</tr>
</tbody>
</table>
| 79    | Industrial Engineering  
Master of Science (MS) | GPA 3.000 in last 60 hours; GRE (general) recommended if undergraduate degree not accredited by ABET; programming competence in C, C++, Visual Basic, or FORTRAN |
| 79    | Industrial Engineering  
Doctor of Philosophy (PhD) | GPA 3.500 in last 60 hours; GRE (general); master's degree in engineering or physical science |
| 79    | Liberal Studies (MA) | GPA 3.000 last 60 hours; essay; personal interview; deadline: April 1 for fall, October 1 for spring |
| 79    | Mathematics  
Master of Science (MS) | GPA 3.0 in all mathematics courses; undergraduate major in math or equivalent |
| 79    | Mathematics  
Doctor of Philosophy (PhD) | GPA 3.0 overall and 3.25 in mathematics and statistics; GRE (advanced) |
| 79    | Mechanical Engineering  
Master of Science (MS) | GPA 3.000 last 60 hours; GRE recommended for applicants from non-U.S. institutions |
| 79    | Mechanical Engineering  
Doctor of Philosophy (PhD) | GPA 3.500 in last 60 hours GRE; master's degree in engineering or physical science |
| 79    | Music (MM)  
Opera, Piano Accompanying, Pedagogy, Instrumental, History/Literature, Theory/Composition | Accredited music bachelor's degree, may require audition and resume; History/Literature will require reading proficiency in at least one of following: German, French, and Italian. Theory/Composition will require submission of representative compositions |
| 79    | Music Education (MME) | BME or equivalent. Options include: Choral, Elementary, Voice, Instrumental, Special Education |
| 79    | Nursing (MSN) | GPA 3.000 in last 60 hours; BSN from nationally accredited school, RN licensure in Kansas; 1 year of practice recommended; statistics; professional liability insurance; NP requires departmental application |
| 79    | Physical Education/Exercise Wellness (MEd) | Application letter, 3 recommendation letters |
| 100   | Physical Therapy (DPT) | GRE (general) scores, GPA 3.000 last 60 hours, references; computer proficiency; physical therapy observation of 20 hours in one or more physical therapy departments; Departmental application and fee |
| 79    | Physician Assistant (MPA) | GPA 3.000 overall and all prerequisites; departmental application; Applicants with health care experience given preference, but it is not required |
| 79    | Psychology (PhD)  
Community | GRE (general); 4 references; departmental application; biographical statement; application deadline for following fall: March 1 |
| 79    | Psychology (PhD)  
Clinical | GRE (general) 4 references; departmental application; biographical statement; application deadline for following fall: February 1 |
| 79    | Psychology (PhD)  
Human Factors | GRE (general); 4 references; departmental application; biographical statement; application deadline for following fall: March 15 |
| 100   | Public Administration (MPA) | GPA 3.000 last 60 hours; letter of application, resume, 2 letters of reference |
| 79    | School Psychology (EdS) | GRE (verbal, quantitative and possible writing assessment); resume, 3 reference letters, statement of goals and research interests; master's in counseling, educational psychology or related area |
| 79    | Social Work (MSW) | GPA 3.000 last 60 hours; strong undergraduate preparation in liberal arts and sciences; departmental application; application deadline: February 1, for fall |
| 79    | Sociology (MA) | 15 hours sociology; college algebra; 3 references; statement of purpose, research interests, goals |
| 79    | Spanish (MA) | GPA 3.000 in Spanish courses; for non-native speakers, 24 hours undergraduate Spanish (8 hours at junior/senior level); for native speakers, 12 hours at advanced level |
| 79    | Special Education (MEd)  
Adaptive, Early Childhood Unified, Functional, Gifted | GPA 3.000 last 60 hours or acceptable GRE or MAT scores; eligible for Kansas Teaching Certificate; application deadlines: April 15 for summer, July 1 for fall, December 1 for spring |
| 79    | Sport Administration (MEd) | Letter of application; resume; 3 recommendation letters, GRE may be required |

* The TOEFL is required of non-native speakers of English. The Internet based/Next Generation TOEFL score minimum requirement for each program is shown on this sheet. The new score scale reflects four skill requirements: Reading, Listening, Speaking, and Writing. Past TOEFL score minimums are: 550 on the paper-based test and 213 on the computer-based test. Some programs require a higher score.

Addresses for entrance exam information and applications for graduate degree programs (see previous page):

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

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

- **Miller Analogies Test**  
  Controlled Testing Center Supervisor  
  The Psychological Corporation  
  555 Academic Court  
  San Antonio, TX 78204-2498 USA

- **TOEFL**  
  Educational Testing Service  
  P.O. Box 6000  
  Princeton, NJ 08541-6000 USA  
  www.Toefl.org
<table>
<thead>
<tr>
<th>TOEFL</th>
<th>Programs</th>
<th>Certificates</th>
<th>Certificate descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>600</td>
<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.</td>
</tr>
<tr>
<td>550</td>
<td>Education</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. Students advance their knowledge of computers in an educational setting, integrate technology into classroom instruction, and utilize technology for communication with students, parents, and the community. Current students in the Master of Education program in curriculum and instruction may choose this certificate to achieve documentation of expertise in educational technology.</td>
</tr>
<tr>
<td>550</td>
<td>Industrial Engineering</td>
<td>Advanced Manufacturing Analysis, Composite Materials &amp; their Processing, Design for Manufacturing, Foundations of Six Sigma and Quality Improvement, Industrial Ergonomics &amp; Safety Lean Systems, System Engineering &amp; Mgmt</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. A 12-hour program aimed at increasing knowledge of the properties of composite materials and manufacturing processes of these materials. A 12-hour program of sequenced and complementary courses for practitioners in industry who are responsible for product design, development, and manufacturing. 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. 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. A 12-hour program of 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. A 12-hour program of integrated 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.</td>
</tr>
<tr>
<td>550</td>
<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.</td>
</tr>
<tr>
<td>550</td>
<td>Nursing</td>
<td>Acute Care Nurse Practitioner, Adult Health and Illness Clinical Nurse Specialist, Family Nurse Practitioner, Nursing and Health Care Systems Administration, Pediatric Clinical Nurse Specialist, Pediatric Nurse Practitioner, Psychiatric and Mental Health 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.</td>
</tr>
<tr>
<td>550</td>
<td>Physical Education</td>
<td>Coaching, Functional Aging</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. A 13-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.</td>
</tr>
<tr>
<td>570</td>
<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, environment health sciences, health services administration and policy, and social and behavioral sciences.</td>
</tr>
<tr>
<td>600</td>
<td>Public Administration</td>
<td>Economic Development, Public Finance, City &amp; County Management</td>
<td>A 12 hour program offering advanced study in economic development by state and local governments. The program enhances student's career opportunities and provides state and local practitioners in economic development and avenue to improve their skills. A 12 hour program offering advanced study in public finance. The program enhances student's career opportunities and provokes public finance practitioners an avenue to improve their skills. A 12-hour program offering advanced study in the management of city and county government.</td>
</tr>
</tbody>
</table>
Graduate School

Offices: 107 Jardine Hall
Susan Kovar, dean
David Eichhorn, interim associate 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 55 master's programs, one educational specialist program, nine doctoral programs, and two 1st professional degrees. More than 3,200 students—roughly one of every five WSU students—are graduate students. The university, classified by the Carnegie Foundation as a Doctoral/Research Intensive institution, annually grants approximately 28 doctoral degrees and more than 700 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; psychology; and in aerospace; electrical, industrial, and mechanical engineering. Two 1st 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 www.wichita.edu/gradsch.

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.

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 the writing of a thesis or the completion of comprehensive exams.

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, and directed readings to provide a comprehensive knowledge of an academic field. During this time, students may also begin independent research projects.

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. 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 the 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 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 Subcommittee, 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.

**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 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 sharing 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 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 must be judged qualified because of academic and/or professional experience, and are expected to possess at least the academic degree of the level of the courses being taught. Responsibilities include graduate teaching only.

**Graduate Faculty Affiliate Membership** is available to those full-time faculty who have not had the opportunity to demonstrate scholarly activity will be nominated for the associate member category. Responsibilities include graduate teaching, serving as a member on thesis and dissertation committees, graduate student mentoring, and advising. If requested, authorization may be granted to chair thesis committees for a period of three years.

**Acting Ad Hoc 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 must 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 a member on 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 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 must be a practicing professional in the program degree area. Responsibilities include graduate teaching, serving as a member on 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 advisors 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 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.

**Graduate Coordinators**
The Graduate School works closely with the 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 their 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 transmission 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 program and the Graduate School office, working with their department chair or other administrators in maintaining the quality and viability of their graduate program, 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 on-line through the Graduate School website at http://webs.wichita.edu/gradsch.

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 must be received in addition to the application and application fee.

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. Transcripts must be mailed directly from the institution where the work was completed. Hand-carried, faxed, or “issued to student” transcripts cannot be accepted.

Credentials other than official transcripts will be considered only for application as a visiting guest student or nondegree, category B student. Please refer to page 10 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 when 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 form/letters where the applicant has waived his/her right to see the recommendations.

An admission to the Graduate School remains valid only if students enroll and complete 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 $50 for students who will require a visa status. $35 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, educational leadership, liberal studies, psychology, social work, and special education. Applicants to the program areas identified above should refer to departmental information in this Catalog for admission deadlines.

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Citizens or International Students</th>
<th>Permanent Residents</th>
</tr>
</thead>
<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>

Applicants who submit applications after these dates, if accepted, should be prepared to register during late registration.

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

1. 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 nine 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.

2. 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 consid- ered for graduate assistantship positions.

3. 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 satisfactorily 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 3.00 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 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 four-year 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. Achieved 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, and 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 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 summary on pages 4 and 5 to determine if a specific program requires an entrance exam.

Doctoral Programs

Applicants for full-standing degree admission to the doctoral 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 four-year 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. Achieved a grade point average of at least 3.000 in the last 60 hours or nearest two years when the bachelor's degree is the admissions credential. Applicants with a master's degree or with completed graduate coursework must have at least a 3.250 grade point average and no more than 9 hours of background deficiencies in the desired field of graduate study. Some departments may require a higher GPA, and,

3. Earned acceptable scores on the General Aptitude Test of the Graduate Record Examination (within the last five years).

Nondegree Admission

Persons who already possess a graduate degree, who do not want to seek a 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.

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 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;

2. Application fee;

3. Two (2) official transcripts sent directly from the institutions, 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 500 through 799.

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

1. A bachelor's degree from a regionally accredited institution. Some programs may require a minimum grade point average.

Although there is no application deadline for nondegree 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;

2. Application fee;

3. Two (2) official transcripts sent directly from the institutions, 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 10th day of the eight-week summer term when certificate completion is anticipated.

The Graduate Plan of Study is prepared in conjunction with the advisor 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 advisors are expected to inform students that a plan of study and certificate degree form 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 a visiting guest. Such admission is valid for only one semester. Admission requires the submission of a completed application, $35 application fee, and a signed letter from the graduate dean or the dean's representative at the 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, the student must obtain regular admission.

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 upper-division letter-graded coursework, selected with appropriate advisement. These 9 hours cannot include repeats of courses for which graduate credit was previously earned. Such coursework must be completed with a grade point average of 3.000 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. Previously dismissed students who are recommended for readmission under this policy will re-enter on probation.
Senior Rule Admission
Seniors at Wichita State or other bachelor’s-degree-granting institutions may qualify to take work for graduate credit under the Senior Rule option. This opportunity applies to students who have an overall grade point average of 3.000 or above in their major field and in upper-division courses and who are within 10 hours of completing the bachelor’s degree. Work must go beyond the requirements for the bachelor’s degree, and the degree must be completed within the semester in which a student takes the graduate courses.

Students who wish to earn graduate credit under Senior Rule must apply to the 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 advisor, 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. The tuition for graduate courses will be assessed at the graduate rate.

WSU Former Graduate Students in Inactive Status
Students who have completed graduate coursework at Wichita State University but who have not enrolled in the past 24 months are placed in an inactive status on the Registrar’s computer database. To enroll again, such students need to call the records section of the Registrar’s office, (316) 978-3063, and ask to have their records reactivated. Such notification needs to be done at least one month in advance of 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 graduate international students must be in the program to which the student was admitted.

3. International students presently in the United States on a student visa obtained by admission to another U.S. university will not be considered for admission to Wichita State University until they have attended the institution issuing their original I-20 for at least one semester. Exceptions to this policy require the concurrence, in writing, of the institution issuing the original I-20.

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 four-year 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.

Graduate programs (with the exception of Aerospace Engineering, Social Work, Nursing, and Physician Assistant) will evaluate international applicants based upon official transcripts of mark sheets through the equivalent of the 1st semester of the applicant’s final year of study. In most instances, this will be the 7th semester of study. For international students on a yearly program, this will be the 6th 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 a graduate student at WSU. Students who fail to meet this final requirement will be shown as “Out of Status” and will be reported to the university’s Office of International Education.

TOEFL Examination
Applicants whose native language is not English must request the Educational Testing Service (ETS) to send their Test of English as a Foreign Language (TOEFL) scores. An official copy of the TOEFL score—less than two years old—showing a minimum score of 213 for the computer-based test or 79 for the Internet-based test is required. Photocopies of the TOEFL scores are unacceptable.

Waivers will be considered if applicants have attended a university in the United States as a full-time student. Full-time is defined as enrollment in academic 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 minimum score (for equivalent paper-based test scores, please contact the graduate school):

<table>
<thead>
<tr>
<th>Program</th>
<th>Computer-based</th>
<th>Internet-based</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business Administration</td>
<td>230</td>
<td>88</td>
</tr>
<tr>
<td>Communication</td>
<td>250</td>
<td>100</td>
</tr>
<tr>
<td>Creative Writing</td>
<td>250</td>
<td>100</td>
</tr>
<tr>
<td>English</td>
<td>250</td>
<td>100</td>
</tr>
<tr>
<td>Gerontology</td>
<td>230</td>
<td>88</td>
</tr>
<tr>
<td>History</td>
<td>250</td>
<td>100</td>
</tr>
<tr>
<td>Physical Therapy</td>
<td>250</td>
<td>100</td>
</tr>
<tr>
<td>Public Administration</td>
<td>250</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. A non-refundable $50 application fee.

3. Two (2) 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 four-year equivalent degree, official copies of the degree statement or diploma are required. Please see the last two paragraphs under the heading “transcripts” on this page.

4. Official certification of the minimum TOEFL requirement. 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.


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 a student 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:

a. Basic injury and sickness benefits amounting to at least $10,000.

b. Major medical coverage in an amount of at least $100,000.

c. Coverage to provide for medical evacuation of the student to the student’s home country.

d. 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 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 website. Unusual and/or substantial deviations from stated rules and regulations require action by the Graduate Council.

An electrical and computer engineering professor and a student conduct an experiment in the ECE department’s Optical Laboratory.
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 a full-time student (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 advisors 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. Exceptions to allow graduate assistants to be enrolled in 6-8 hours may be approved by the program where 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
People wishing to enroll under the Senior Citizens Program in courses numbered 800 and above must first obtain the written permission of the instructor.

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 website for any given semester.

Newly admitted, currently enrolled, and former graduate students, not academically dismissed, are eligible for web 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.

Once a student has enrolled and paid, classes can be changed only by filing a Drop and/or Add Form with the necessary signatures. 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.

Only partial refunds are made after certain cutoff dates. Late enrollments or adds normally will not be approved after the 20th class day. Drops of classes with a grade of W (withdrawal) are also subject to a time limit established by the Registrar.

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

Basic Fees: Proposed 2006-2007
The tuition and fees listed are subject to change by action of the Kansas Board of Regents.

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

<table>
<thead>
<tr>
<th></th>
<th>Resident</th>
<th>Nonresident</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undergraduate tuition</td>
<td>Per credit hour $144.45</td>
<td>$362.90</td>
</tr>
<tr>
<td>Graduation tuition</td>
<td>Per credit hour $163.50</td>
<td>$490.50</td>
</tr>
<tr>
<td>Student fee* (Graduate and Undergraduate)</td>
<td>Per credit hour $21.85</td>
<td>$21.85</td>
</tr>
<tr>
<td>University registration fee— all students</td>
<td>Per semester $17.00</td>
<td>$17.00</td>
</tr>
<tr>
<td>Facilities use fee**— all students</td>
<td>Per credit hour $3.60</td>
<td>$3.60</td>
</tr>
</tbody>
</table>

*The student fee is required of every student enrolled on the Wichita State University campus (City of Wichita, its contiguous industrial sites and the West Campus). Proceeds from the student fee are distributed to pay for Educational Opportunity Fund, student union, athletics, Heskett 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 $136.05 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 $125.00 (undergraduate) or $178.00 (graduate) per credit hour is assessed for off-campus regular enrollment and continuing education credit courses or workshops. Non-credit workshops on campus include a facilities use fee ($5.00 for workshops of 7 or fewer consecutive days and $10.00 for longer-term workshops). Non-credit workshops off campus will not pay a facilities use fee unless they choose to do so for the purpose of having a vehicle on campus.

Auditing Course Fees
Students pay the same tuition and fees per semester hour for audited courses as for credit courses.

Payment
Tuition and fees are required to be paid in full, including any financial aid or loans a student may have, before enrollment is complete and the student is eligible to attend classes.

A short-term loan program is available to assist students in making tuition payments through an installment payment plan. 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. These interest free loans are limited to 75 percent of a student’s total tuition and fees, plus a $30 nonrefundable administrative fee. Loans are available to students at the time of enrollment. Students must enroll in person to be eligible. Such loans must be repaid in three equal installments according to the deadlines for a given semester.

Assessment and Collection
The university controller is responsible for the assessment and collection of fees. The associate controller, two associate deans, an admissions officer, and a representative 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.

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 account is 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 pro-
vided 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 under the program administered by the Kansas Department of Education, 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
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 residence, within the broader state law. The law and regulations are different than those that govern residency for any other purpose.

According to the 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/re-enrollment and who has demonstrated, during those 12 months, the intent to make Kansas their permanent home. Intent is evaluated in light of: (1) the person's statement about why they 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 nonconclusive 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/re-enrollment."

Residents of Kansas (for fee purposes) who leave the state retain their residency as long as they return to Kansas permanently within 12 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, 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 6 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 Indians.

an 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 new law states that a person who is residing in Kansas and who 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 nonpermanent immigration status, undocumented aliens, and former Kansans who have not been back in Kansas long enough to re-establish residency. There is nothing in this law that would apply it to an eligible person's spouse or dependents.

**Procedure:** People who have been admitted as nonresidents 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 nonpermanent 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 affidavit indicating that they are not eligible to pay resident rates in any other state.

Students applying for residency should contact the Registrar's Office, 102 Jardine Hall. There are many details about establishing Kansas residency for tuition purposes that will be explained upon further inquiry.

Residency of new students enrolling for the first time at Wichita State is determined by the appropriate (undergraduate, graduate, or international) admissions office according to the above law/regulations. Such students should address questions concerning residency to the appropriate admissions office.

When a continuing student, who was initially classified as a non-resident, thinks he/she meets these residency requirements, then he/she must apply for residency using a form available from the Registrar's Office. Lower fees do not mean that someone has been classified as a resident — there are no non-resident fees, for example, for workshops or off-campus courses.

The responsibility of registering under proper residency is placed on the students. If there is any possible question of residence classification, it is the duty of a student when registering and paying fees to raise the question with the Registrar's Office. Students who disagree with their residency classification are entitled to an appeal, provided they file a written appeal with the registrar within 30 days from enrollment and pay the fees as originally assessed. A standard appeal form is provided by the Registrar's Office. If notice of the appeal is not given in writing within 30 days, the classification or reclassification by the registrar becomes final. Appeals are reviewed and decided by the University Committee on Residency, and its decision is final. The committee is not empowered to make exceptions, just to apply the law and regulations to individual circumstances.

Students must report their correct address at the time of registration each semester. The address given must be the student's actual place of residence, since it will be the one to which all correspondence from Wichita State is sent. Any change in residence must be reported within three days to the Registrar's Office.

More complete information on the residence law and regulations can be obtained from the Registrar's Office.

**Special Fees and Refunds**

The student fees and facilities use fees, required of all students enrolled on the Wichita State campus, support the Educational Opportunity Fund, parking, student union, athletics, Heskett Center, Student Health Services, forensics, Student Government Association, University Forum Board, student publications, and other student activities.

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.

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 the Controller, 201 Jardine Hall.

Students with extenuating circumstances may petition the Tuition Refund Board of Appeals for a higher refund than that allowed by policy. The petition forms are available at the Controller's Office, 201 Jardine Hall. In order to be considered, the petition must be filed with appropriate documentation and within the semester of enrollment for the course.

Students who receive approval from the University Exceptions Committee for a late withdrawal from a previous semester are not generally approved for tuition refunds. These are separate issues and decisions. No one other than the Controller's Office or the Tuition Refund Board of Appeals is authorized to
determine the amount of tuition refund a student will receive.

Student Identification
Each student is identified on the university’s computer files by a unique set of eight numbers and letters, called myWSU ID. This ID is assigned and communicated to you at the time of admission. Social Security Number (SSN) is also required for anyone who has federal financial aid or is employed by the university, as they must be identified on those records by their SSN.

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 utilize the following services: Ablah, Heskett Center, Athletic Ticket Office, Student Government, Student Health Services, WSU Police Department, and the Shocker One Stop (SOS) system.

Transcripts
Transcripts may be ordered in person at the Registrar’s Office or by written request. Request forms are available from the Registrar’s website. Official transcripts are $8 per copy with the fee waived for currently enrolled WSU students. Some quantity restrictions apply. Current enrollment for a semester/term starts with the first day of classes for a given semester/term, and extends until classes begin for the upcoming semester/term. A $10 fee for immediate service will be charged for all requests that require same-day service.

When ordering a transcript through the mail, include your full name, student ID number, birth date, first and last semester and years enrolled at WSU, complete information as to where to mail the transcript, your signature, and a check or money order for the appropriate amount ($8 per copy) payable to WSU. People requesting a transcript of their record must also provide proof of identity; by mail or fax: a readable copy of one of their government-issued photo identifications; such as driver’s license, passport, military ID, etc.

Mail the written request to:
Attention: Transcripts
Registrar’s Office
Wichita State University
1845 Fairmount
Wichita, Kansas 67260-0058

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.

4. The student violates the provisions of the Student Responsibility statement or Code of Conduct statement. (See page 28.)

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.

Students in WSU’s are and design programs have the opportunity to exhibit their work in the Clayton Staples Callery.
Academics

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

An advisor assigned at the time of admission to a departmental 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 advisor may chair an Advisory Committee which also will be involved in the advising activities above. It is possible for the advisor to be named as Chairperson of the Supervisory or Dissertation Committee.

Students with assigned advisors should consult their advisors 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 discernably higher level of performance by graduate students is expected 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 discernably higher level of performance by graduate students is expected 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 advisor 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 1 and 2 without success, he/she should schedule a meeting with the dean of the Graduate School or his/her 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 his/her 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 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 reserves the right, in exceptional circumstances, to suspend this rule.

Any student may use the appeal procedure. Forms are available in the Division of Campus Life and University Relations, 105 Grace Wilkie Hall. The general procedure is explained to students when they pick up the form.

Audit Credit
Students are permitted in credit courses on a noncredit 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 the audit basis may be repeated for credit, and if repeated may be used to ful-
fill degree requirements if the repeated grade is acceptable. Use of the audit basis for a course must be declared at the time of enrollment.

**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.
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**

- **A** Distinguished achievement. Credit given; four credit points per semester hour.
- **B** Superior achievement. Credit given; three credit points per semester hour.
- **C** Average achievement. Credit given; two credit points per semester hour.
- **D** Below average achievement. Credit given; one credit point per semester hour.
- **F** Failing work. No credit given; no credit points earned.
- **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.
- **R** Repeat. A prefix to other grading symbols indicating that the course is a repeat of one taken earlier, such as RA, RB, RC, RD, RF, or RI. The R prefix has no evaluative function but is used for information only.

**Repeats**

A graduate student may enroll in graduate courses (for credit) a second or subsequent time and have it counted as part of the student’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 transcript. 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). A student must declare, at the time of enrollment, that the course is being repeated.

**Grades**

Coursework for graduate credit is normally graded A, B, C, D, F, or S/U. 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 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, etc.) 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 grade point average. Courses transferred from another institution and graduate credit courses graded S (satisfactory) do not affect the 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 below C may not 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 Classes, 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 Credit 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.

**Grade Reports**

At the end of each semester, students may access their final grades through the Shocker One Stop (SOS) option on the university website (www.wichita.edu). Students desiring a printed report of their grades may make such a request through SOS.

**Change of Grades**

Students desiring credit for an incomplete grade assigned Spring 1999 or later for regular courses (excluding research, dissertation, thesis, independent study, and other terminal projects) 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 to 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.

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**

Students admitted to full-standing in a degree program, or nondegree category A, will be placed on academic probation if their graduate grade point average falls below 3.000. Students placed on probation after admission are not eligible for assistantship awards or
federally funded financial aid during the semesters in which they are on probation. Students placed on probation after admission will automatically be moved off probation to full standing upon completion of 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 or CR/NCR courses will not count toward the 9-hour requirement. 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.

Dismissal
Students in any category may be dismissed from the Graduate School if they fail to maintain a grade point average of at least 2.000 in all work taken (including undergraduate courses) after admission.

Students may be dismissed from their degree program or nondegree category A and placed in nondegree category B if they fail to attain a cumulative grade point average of at least 3.000 upon the completion of 9 graduate credits after admission on probation or placement on probation after admission.

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 the 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 upper-division, letter-graded coursework, selected with appropriate advisement. These 9 hours cannot include 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. Previously dismissed students who are recommended for readmission under this policy will re-enter 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 majors.

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 titled Cooperative Education. No other course titles such as independent study, special topics, and so forth can be used for cooperative education enrollment. Co-op courses are graded Cr/NCr.

Graduate students desiring to participate in cooperative education classes should first consult with their program and the Graduate School. The Cooperative Education and Work-Based Learning Program office 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 other institution in satisfaction of its advanced degree requirement; (c) the credit is 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. Grades lower than B, including B-, will not be accepted.

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.

Graduate credit work from another university which has been accepted for transfer is not transferred or entered on a Wichita State University transcript, except for students completing degree programs, and only then after completion of all work for the degree, as defined on an approved Graduate Plan of Study.

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.

3. The work is an integral part of a program planned by the candidate and the advisor 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 two commencement ceremonies each year, one in December and one in May. All baccalaureate and master's degree candidates for spring ceremonies 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 website: http://www.wichita.edu/commencement.

Diplomas are available for distribution approximately six 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 Shocker ID card.

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 examinations are required of all students presenting thesis or research dissertations except in special circumstances approved by the Graduate Dean. 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, the major advisor (thesis or dissertation committee chair) has been identified for the student (via Plan of Study or other document sent to the Graduate School), that advisor stays in place for the duration of the thesis or dissertation. Dissertation and thesis students considering a change in their major advisor should consult departmental guidelines for doing so. Doctoral students changing major advisors 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 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.

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, excluding workshops. 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, excluding workshops.

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 Degree 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 advisor of the Graduate Certificate program area and is forwarded to the Dean of the Graduate School. Graduate programs offering Graduate Certificates should have a process for knowing who is completing certificate work. Certificate advisors are expected to inform students that a plan of study, certificate degree form, and certificate $15 filing fee is required according to the above guidelines.

Degree Application
An Application for Degree card 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 students plan to finish all requirements for the degree.

Students planning to graduate at the end of the summer session must file an Application for Degree card 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 degree card must be filed by the second week with an indication of intent to enroll for the second four weeks.

If, after a student files a degree card, the degree is not completed, a new card 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 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 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 advisor and signed by the candidate, the advisor (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 Degree Check Sheet from the Graduate School. If the Degree Check Sheet has not been received approximately three weeks following submission of the proposed plan, students should check with the Graduate School office.

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 nondegree, 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 a Request 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 must submit a 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 B or better performance by the student.

Transfer courses and work that originally received a grade of C or below may not be validated. Courses completed 10 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 transcripts. 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 advisors. This includes the semester of graduation. Enrollment is for the number of hours that accurately reflects 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 advisors. 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 demands of the student on university faculty and facilities.

**Thesis/Dissertation Preparation**

Beginning Fall 2006, all students will be 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 Dropbox 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 and the entire committee. 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, etc.) required by the major program must be identified in the student’s Plan of Study. The completion of this tool is not required prior
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-donor 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 other institution in satisfaction of its advanced degree requirement; (c) the credit is 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. Grades lower than B, including B-, will not be accepted.

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

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.

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 below C may not 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 semester 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 5 or Credit 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. Graduate students must be enrolled in the semester of graduation. Such enrollment recognizes the use of university resources, including faculty and staff, as part of degree completion.

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

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 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 website. 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 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. The department chair 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 $5,000 to $12,000.

Graduate students holding assistantships during a fall or spring semester are expected to enroll in at least 9 credit hours of graduate coursework. Exceptions to allow graduate assistants 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 exception process.

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, advisors, 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 website or the program area of their interest.

General Awards

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

Graduate School
107 Jardine Hall
Wichita State University
1845 Fairmount
Wichita, Kansas 67260-0004
Phone: (316) 978-3095
E-mail: gradinqua@wichita.edu

Dora Wallace Hodgson Outstanding Graduate Student Awards
Established in 1995 through a donation to the WSU Endowment Association from the Dora Wallace Hodgson estate, awards are given annually for the following categories: Outstanding Doctoral Dissertation, Outstanding Doctoral Student, Outstanding Master’s Student, Outstanding First-Year Doctoral Student, and Outstanding First-Year Master’s Student. Students nominated for any of the Dora Wallace Hodgson Awards must meet general eligibility requirements including good standing in a degree-bound program, nomination by a faculty member, and approval by their graduate coordinator or department chair and the dean of their college. The nomination deadline for these awards is the first Monday in February.

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. Application deadline is the first Monday in October.

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 science, foreign language, or education. Eligible students may apply by submitting a letter of application, and one letter of support from a faculty member. Application deadline is the first Monday in October.

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 or 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. Applications are due by the first Monday in June for fall; first Monday in October for spring. A financial statement form is part of the application.
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 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. Applications are due the first Monday in October for fall; first Monday in February for spring.

The Robert and Darlene Anderson Fellowship
The Robert and Darlene Anderson Fellowship is awarded to a currently-enrolled graduate student in good academic standing in any graduate program. Preference is given to a school nurse. Eligible students may apply by submitting a letter of application, and one letter of support from a faculty member. Application deadline is the first Monday in October.

Special Research Fellowships
Special Research Scholarships encourage research among graduate students and recognizes 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 per calendar year 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 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 advisor with awards made upon availability of funds. Programs will be notified of fund availability on an annual basis. Application deadline is the first Monday in April.

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 student and their family can afford to pay.

The amount the student and his/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 five credit hours for the fall or spring semesters, and three 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 dates below.

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<thead>
<tr>
<th>Enrollment Period</th>
<th>Due Date</th>
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<tr>
<td>Spring</td>
<td>November 1</td>
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<tr>
<td>Summer</td>
<td>April 1</td>
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<tr>
<td>Fall</td>
<td>March 15</td>
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Work Opportunities
The Kansas Career Work-Study Program is administered by Wichita State’s Office of Cooperative Education and Work-Based credit courses. This state-funded program increases the number of off-campus jobs available to students. Besides earning money to help with graduate school expenses, graduate students also earn academic credit and gain practical degree-related experience. The earnings from a work-study program are figured into the total financial assistance package.

Many graduate students also 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 a well-paying job that complements their academic field of study. Students earn academic credit while learning degree-related skills and earn money to support their graduate studies.

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.

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 metropolitan 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 utilizing the human diversity of Wichita, the state’s largest metropolitan 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, metropolitan university of national stature.
General University Information

2006-2007 University and Academic Officers
Donald L. Beggs, president
John J. Hutchinson, vice president for Academic Affairs and Research
Roger D. Lowe, vice president for Administration and Finance
Elizabeth H. King, president and CEO of the WSU Foundation
Ronald R. Kopita, vice president for Campus Life and University Relations
Ted D. Ayres, vice president and general counsel
Jim Schaus, director of Intercollegiate Athletic Association, Inc.
Eric Sexton, director, Government Relations
Susan Kovar, dean of the Graduate School
John M. Boeblinger, dean of the W. Frank Barton School of Business
Jon Enghalder, dean of the College of Education
Zulma Toro-Ramos, dean of the College of Engineering
Rodney Miller, dean of the College of Fine Arts
Peter A. Cohen, dean of the College of Health Professions
William Bischoff, dean of Fairmount College of Liberal Arts and Sciences
Pal Rao, dean of Libraries
Cheryl M. Anderson, dean of students
James Kelley, dean of Operations and Personnel for Campus Life and University Relations
Christine Schneikart-Luebbe, dean of Enrollment Services

Kansas Board of Regents
Reggie Robinson, president and CEO
Board Members:
Donna L. Shank, Liberal, chair
Nelson Galle, Manhattan, vice chair
Richard Bond, Overland Park
Janice B. DeBauge, Emporia
Christine Downey-Schmidt, Inman
Frank Gaines, Hamilton
James Grier III, Wichita
Dan Lyking, Topeka
Janie Perkins, Garden City

Wichita State University Profile
Wichita State University is distinguished from other state-supported schools in Kansas by its urban setting. Wichita State'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.

With an enrollment of more than 14,000, Wichita State prides itself on specialized attention to each student. Although the university's students come from almost every state in the Union and 110 foreign countries, 87 percent are from Kansas, representing nearly all counties in the state.

The average age of freshmen at Wichita State is 19; the average age of all undergraduate students is 24. The average age of all graduate students is 30. Approximately half the students at WSU attend full-time, while the other half attend part-time and take advantage of gaining work experience at such local companies as Boeing; Raytheon Aircraft; Cessna Aircraft; Coleman; Bank of America; Bombardier Aerospace-Learjet; Via Christi Regional Medical Center; Wesley Medical Center; and Koch Industries. Wichita State students also take advantage of hundreds of campus activities, plus enjoying the largest selection of malls, shops, restaurants, clubs, golf courses, amusement parks, and movie theaters in the entire state.

Wichita State University offers more than 60 undergraduate degree programs 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 Fairmount College of Liberal Arts and Sciences. The Graduate School offers an extensive program including 54 master's degrees, which offer study in more than 100 areas; a specialist in education degree; doctoral degrees in applied mathematics, chemistry, communication sciences and disorders, psychology, educational administration; and doctoral degrees in aerospace, electrical, industrial, and mechanical engineering. Two 1st professional degrees are also awarded: Doctor of Audiology and Doctor of Physical Therapy. Wichita State University is classified as a Doctoral/Research Intensive institution by the Carnegie Foundation. A listing of the programs and degrees offered at Wichita State University is located on pages 5-6 of the Graduate Catalog.

WSU offers the traditional fall and spring semesters. It has the largest number of evening and summer course offerings in the Kansas Board of Regents' system. The summer session features a flexible time format with a two-week pre-session and two four-week sessions held concurrently with the regular eight-week session. During the traditional sixteen-week semester, many courses are offered in an eight-week, four-week, or shorter format.

Although WSU's first commitment is to excellence in instruction, it is equally committed to excellence in research and public service.

An important resource to the Wichita area business community, Wichita State supports business and industry through programs such as those offered by the Mid-America Manufacturing Technology Center. The corporate community utilizes programs offered by the University's Center for Management Development for continuing professional development. The Center for Entrepreneurship encourages development of small businesses, while the Hugo Wall Center for Urban and Public Affairs supports local and state government activities.

The 330-acre campus is modern and accessible and at the same time retains the flavor of the university's 110-year heritage. More than 60 pieces of sculpture by internationally known artists adorn the campus. Personages Oiseaux, a colorful mural created by the great Spanish artist Joan Miró, is displayed on the wall of the Edwin A. Ulrich Museum of Art.

During the past 20 years, Wichita State has more than doubled its instructional space, adding major buildings for art, engineering, health sciences, biological sciences, physical education, music, dance, and liberal arts and sciences.

Approximately 120 social and special interest clubs provide opportunities for students to meet and work with others who share their interests. Seventeen national sororities and fraternities are active on campus.

WSU is a Division I institution and fields teams in tennis, cross-country, basketball, track, golf, crew, soccer, and bowling; men's baseball; and women's volleyball and softball.

Wichita State has 469 full-time faculty and 53 part-time faculty. Of the total, 76 percent have earned the highest degree in their field. Graduate faculty status has been awarded to 418 members of the full-time faculty. Of all undergraduate credit hours, 63 percent are taught by full-time faculty. The average age of our faculty is 51.2; 60 percent are males and 40 percent are females.

University Policies

Access to Records (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 who are declared independent. 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. You can obtain a copy of the policy from the Registrar's office.

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 University 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, Controller, Computing Center, Dean of Students, Financial Aid, Career Services, Cooperative Education, Planning, Testing, Library, College deans, academic advisors, 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 accomplishment of some task or determination; 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 Designation
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), 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 activities and sports, physical factors (height, weight of athletes). Currently enrolled students may withhold disclosure of "Directory Information" (on an all or none basis) to non-institutional persons or organizations. You have an option to protect your privacy and not have such information as your address and telephone number released. Forms requesting the withholding of this information are available in the Registrar's Office, 117 Jardine Hall, and should be returned to that office. Otherwise, the university assumes that you approve 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 you do not want to be included in the Campus Directory, which is published each fall and which is available to people outside WSU. Requests to withhold "Directory Information" must be filed annually. Other than the Campus Directory, the university does not give or sell lists of students to private companies.

Family Educational Rights and Privacy Act

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: That information described in Section 99.3 of the "Final Rule on Education Records, Privacy Rights of Parents and Students." This information is defined by the code as: "Information relating to a student: Name, current address, level and school, date 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 institution attended by the student. The name(s) and address(es) of the student's parent(s) or guardian(s) may be disclosed when used for an official university notice release about the student's receipt of degrees or awards or about participation in officially recognized activities or sports."

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 was 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/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 or other family member; 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, student employees 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 identification 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; (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;
3. Such waiver is not required by the university as a condition of admission or for any other service or benefit of the university.

The university may disclose personally identifiable information without the consent of the student if:

1. 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.
2. The university may, without the consent of the student, disclose directory information, as described earlier.
3. If a student wishes to have such information withheld, he/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/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; 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, provided the disclosure is needed: (1) to determine the eligibility of the student for financial aid; (2) to determine the amount of financial aid; (3) to determine the conditions which will be imposed; (4) 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 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: (1) the seriousness of the threat to the health or safety of the student or individuals; (2) the need for the information to meet the emergency; (3) whether the parties to whom the information is disclosed are in a position to deal with the emergency; (4) the extent to which time is of the essence in dealing with the emergency.

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 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

Each office which maintains education records shall adopt its own policy with regard to destruction of education 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 legit-
late 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 hearings 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 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.

(1) 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.

(2) 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, he/she 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/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. If 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.

Accident or Injury
The state of Kansas and Wichita State University do not insure against 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.

Human Relations
Notice of nondiscrimination.

1. It is the stated policy of Wichita State University to prohibit discrimination in employment and in educational programs and activities because of race, color, religion, gender, age, marital status, national origin, sexual orientation, political affiliation, disabled/Vietnam-era veteran status, or physical or mental 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 67260-0001. 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. The WSU Graduate Catalog is available in other formats. Inquiries should be addressed to the Office of Disability Services.

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. Our well-lighted campus and parking lots are regularly patrolled by WSU police officers and student cadets. Beginning at 6:00 p.m., the university provides shuttle bus service from residence halls to the academic buildings, and 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 campus police station are strategically placed around the campus.

Campus crime statistics are reported in the Schedule of Courses and on the Web. Review safety and crime prevention information in addition to daily crime logs and crime statistics at the police website, www.wichita.edu/police.

Student Responsibility
Students at Wichita State University have the following responsibilities:

1. To consult their advisors on all matters pertaining to their academic careers, including changes in their programs.
2. To observe all regulations of their college 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 advisors, faculty, deans, and other university officers.
7. To file an Application for Degree in the Graduate school no later than the 20th day of the fall or spring semester (or 10th day of summer semester) of graduation.
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 or unlawful acts will not be countenanced.

Within its sphere of responsibilities 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
Purpose: To set forth comprehensive and informational guidelines relative to student conduct and student disciplinary procedures.

Preamble:
Wichita State University is a learning community comprised of students, faculty and staff committed to the highest pursuit of intellectual inquiry and knowledge. As members of the WSU community, we:
1. Practice personal integrity and academic honesty.
2. Value the worth, dignity and uniqueness of each person through words and actions.
3. Demonstrate civic responsibilities by being involved members of the university and the greater Wichita community.
4. Respect university property, the surrounding environment, and the personal possessions of others.

The educational process is ideally conducted in an environment that encourages reasoned discourse, intellectual honesty, openness to constructive change, and respect for the rights and responsibilities of all individuals. This Student Code of Conduct is designed for the promotion and protection of such an environment.

A. Definitions
tion also helps support WSU’s Student Ambassador Society.

For more information about the groups, events, projects and publications of the WSU Alumni Association, call 978-3290 or drop by the Woodman Alumni Center, 4205 East 21st Street, just east of Eck Stadium/Tyler Field.

WSU Foundation
The WSU Foundation, the private fund-raising organization of the university, works to assure a university of excellence by identifying donors, cultivating and maintaining relationships, securing gifts, and managing resources to enable students and faculty to excel. 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, securities, 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 2005, $3.2 million was given to university programs from endowed funds of the Foundation and Board of Trustees. Of that, $1.1 million was in the form of scholarships to undergraduate students. The remainder funds projects like faculty support, research, Ablah Library, and the Ulrich Museum of Art.

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

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 110 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, two equipped seminar rooms, and a recently-added coffee bar. Over 125 computer workstations 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 capability and are networked to print stations. Ten laptops are available for in-library use. Students have access to a wireless network throughout the building. Other available facilities include electronic 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 help-desk personnel are available to help library users locate information and use the equipment and facilities. 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 rapidly 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 the library resources and services is located on the Libraries’ website at http://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. You will find more details about these and other services online. See www.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 like e-mail support, Internet use, and class project assistance.

Jabara Hall

- 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.

Shockner One Stop (SOS)
Shockner One Stop is a web site, maintained by UCATS, that allows every student to view and edit their own WSU information. Examples are: Register for classes, view class schedules; current grades, transcript, financial aid information; edit personal e-mail and address data, and locate your academic advisor. For more information about this service and information on how to activate the account, go to www.wichita.edu/sos.

Internet Access (Shocknet2)
A dial-up connection service (56k) to the Internet is provided by UCATS. Shocknet2 is provided at a nominal fee and there is assistance available to support anyone who has problems getting a proper connection. Application, installation instructions, and other information about Shocknet2 is available through the staff at the Jabara Computer Labs, WSU-HELP (978-4357) or www.wichita.edu/shocknet2.

Campus Network Access
All residence hall students are provided a direct connection to the campus network. This includes a high-speed access to the Internet. Students can also register their wireless network cards through their SOS account that will authorize wireless access in the Library and Rhatigan Student Center. Other buildings will soon be added for additional wireless access connections.

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

myWSU
The university portal, myWSU.wichita.edu can be accessed directly, or it is available from the www.wichita.edu website, with a link appearing on the upper right corner of the home page. The portal requires use of the myWSU ID and a password, thereby allowing entrance to a secure site, customized with personal information. The portal is the gateway to course files (Blackboard), e-mail messages, grades, financial aid monitoring, and directory information. The myWSU site can be customized with favorite links, so that it becomes a daily must-visit.

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.

The MRC operates the university’s cable television station, WSU-TV, and programs three other channels:
The MRC oversees the radio station licensed to the university, KMUW 89.1 FM. A public radio station, KMUW also operates the Wichita Radio Service.

Facilities and resources at the MRC include an interactive television (ITV) classroom, a multimedia lab, and a professional television production studio. The MRC has designed and installed 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.

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.

Math Lab
The Math Lab, 371 Jabara Hall, offers free mathematics tutoring for WSU students enrolled in the following courses: 007, Arithmetic; 011, Beginning Algebra; 012, Intermediate Algebra; 111, College Algebra; 112, Precalculus Mathematics; 123, College Trigonometry; 144, Business Calculus; 242, Calculus I; and 370, Elementary Statistics. Students may spread out their books and study math knowing that help is available when needed. Numerous mathematics faculty members volunteer time in the lab and it is staffed by graduate students and exceptional undergraduate students who are studying mathematics and/or mathematics-related disciplines. No appointment is necessary; students are encouraged to visit the lab during its hours of operation. To determine the hours for the current semester, refer to the schedule posted outside the lab or check the math department’s Web site, www.math.wichita.edu.

Writing Center
The WSU Writing Center in 601 Lindquist Hall is free and open to all WSU students. In the Writing Center, all students can meet with a tutor, who is either an undergraduate or graduate teaching assistant. While tutors do not proofread or edit, they offer assistance with all aspects of writing, including brainstorming, organization, style, and revision, as well as specific writing concerns voiced by the student. A tutoring session lasts about 30 minutes. No appointment is necessary, but appointments may be scheduled by contacting the center at (316) 978-3173.

In addition to tutoring, the center is equipped with five computers with Windows, Microsoft Word, and Internet access. Students may also do online writing exercises to help improve basic grammar skills. Reading comprehension exercises are also available in the center.

The Writing Center is open 9 a.m.-3 p.m. Monday through Friday and 5-7 p.m. Monday through Thursday. 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.

Office of Student Life
The Office 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, Career Services, Judicial Affairs, Counseling and Testing Services, and Student Health Services. Additional services include the Court of Academic Appeals, Legal Aid, Emergency Short-Term Loans, and the International Student Hardship Fund. The Office of Student Life also publishes the Student Hand book, 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 105 Grace Wilkie Hall.

Career Services
The Career Services office provides services to students, alumni/alumnae, and community members seeking career advice or employment-related assistance.

Individual career counseling is available to assist students, alumni/alumnae, and community members with planning and decision making. Assessment instruments, including the Strong Interest Inventory and Strengths Finder, are offered for self-assessment. Workshops, presentations, and classroom instruction are offered to enable people to learn about the responsibilities of various career fields, to prepare job resumes and letters of application, to conduct effective employment interviews, and to make informed decisions.

Occupational and career information, information on employment trends, annual salary survey reports, and information on graduate and professional school opportunities are available in the Career Exploration and Resource Center (CERC).

The CERC also houses a lab which provides computers for students to prepare job search documents such as resumes and cover letters. The computers also provide Internet access for career research, as well as for online registration and interview sign-up.

Degree candidate services include computerized resume referral to career employment vacancies; web resume books; on-campus interviews with employer representatives; and on-line positions listings. A bi-weekly e-mail newsletter provides career-related tips and information on programs and events.

Employment services also include online listings of part-time and summer employment opportunities.

Contact Career Services in 210 Grace Wilkie Hall, at (316) 978-3435, or online at careers.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 facilitate 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 six weeks to six years old. Full- and part-time care is available in addition to a school-age program during the summer.

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 studentservices.wichita.edu/cdc.html.

Counseling and Testing
The Counseling and Testing Center provides psychological services and counseling for personal and career/life planning issues. Professional counseling is available on a cost-shared basis to all members of the university community—students, their families, faculty, and staff. Individual, couple, family, and group counseling are aspects of the professional counseling services. Testing services also are part of the center’s function. The credit by exam program and the National Testing program are administered directly by the Counseling and Testing Center. The National Testing program includes 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 webst.wichita.edu/cnslst.

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:
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 Station, and The Corner Market, as well as a catering department 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. Visit the University Bookstore on the Internet at www.wsubooks.com or call (316) 978-3490.

The RSC’s Recreation Center is located on the lower level for leisure use. It includes pinball, video games, bowling, billiards, poker tournaments, karaoke, snacks, locker rental, an engraving shop, laminating services, and a barber/beauty shop. The Rec Center, perfect for parties, is available for campus and non-campus group rentals at reasonable rates. The Rec 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 one hundred events annually, including Shocktoberfest and Hippodrome.

The RSC is also home for the Student Government Association, Student Advocate, Shocker Card Center, Commerce Bank, University Dining Services, 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 SAC is supported through revenues generated from within the operation and from student fees. Visit the SAC on the web at www.sac wichita.edu.

Sports and Recreation
Numerous sports and recreation programs exist at the university. Wichita State is a member of the Missouri Valley Conference; WSU men compete in basketball, baseball, track, tennis, and golf, and WSU women compete in basketball, softball, track, tennis, golf, and volleyball. The university fields teams in bowling and crew as independent sports.

There also is an extensive campus recreation program. Club sports include spirit squad, dance squad, racquetball, men’s and women’s soccer, men’s volleyball, wheelchair athletics, ice hockey, and akido. Intra-mural sports include flag football, basketball, table tennis, badminton, soccer, softball, bowling, swimming, and racquetball. 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.

Facilities
The 10,400-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 recently underwent a $7.8 million renovation 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 programs; and the 1,000-seat C. Howard Wilkins Softball Facility for intercollegiate softball for women. Visit us online at www.goshockers.com.

The Scotthet恐怖, 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 separate diving well, seven handball-racquetball 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: www wichita.edu/heskett.

Office of Multicultural Affairs
The Office of Multicultural Affairs (OMA) is to create and sustain a safe and supportive environment where, through collaboration, dialogue, and action, students, staff, faculty, and administration build a learning community that generates, transmits, and applies knowledge designed to advocate, promote, and celebrate cultural understanding of self and others.

The vision of the Office of Multicultural Affairs is to be responsive to the needs of students of color and other underrepresented student populations as well as to the institutional commitment to diversity. We seek to foster a climate within the campus community which recognizes the value that multicultural diversity brings to the total educational experience. We strive to create an environment where human differences are celebrated to encourage greater respect on the campus for differences in race, ethnicity, gender, age, disability, religion, sexual orientation, marital status, political affiliation, and national origin; and to capitalize on the rich diversity of the campus community. Our vision is accomplished by presenting nationally...
renowned speakers, cultural sensitivity programming, and cultural sensitivity exploration for WSU student groups, offices, departments, and community agencies. We are “Many Different Cultures with One Vision, which is UNITY. OMA strives to empower all students, staff, and faculty to always remember our focus: Understand that Networking, Inclusion, and Tolerance begin with You!”

The administrative Office of Multicultural Affairs can be reached at 316-978-3034 and is located in the Grace Wilkie East Annexe 174. Visit us online at www.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 ranging from the Heskett Center, Rhatigan Student Center, and Student Health Services. SGA also provides opportunities to fund your 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 Ahlberg 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.

Student Rates

Special rates for students are available for some campus activities. The following offices have ticket and price information: Fine Arts Box Office (Duerksen Fine Arts Center)—dance, music, opera, and theatre; Charles Koch Arena—athletic events; Braeburn Golf Club—student golf rates.

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. The Eugene M. Hughes Metropolitan Complex, located at 29th Street North and Oliver is considered part of the main campus. Continuing education classes and special services including the Speech-Language-Hearing Clinic and the Wichita Radio Reading Service 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.

Rhatigan Student Center

See description of the Rhatigan Student Center on page 31.

Satellite Location

Beginning Spring 2006, WSU will offer more than 150 class sections each semester at the new West Campus located at 3801 N. Walker Avenue, which is near 37th Street North and Maize Road.

A full range of general education courses (with the exception of laboratory sciences) will be offered. Additionally, social work, education, and communication will offer courses in their major areas. Selected graduate courses are also offered. This new facility will offer services such as advising, tuition and fee payment, as well as library checkout and return.

A satellite bookstore with textbooks, paper products and WSU apparel will also be available. For further questions call: (316) 978-6777.

Sports Facilities

See description of the university’s sports and recreation facilities on page 31.

Ulrich Museum of Art

Art with a pulse! The Ulrich Museum of Art is Wichita’s premier venue for modern and contemporary art. If you’re wondering what’s new and different in today’s art scene, this is the place to visit. What’s on the walls? What’s coming up? Check out our website at www.ulrich.wichita.edu for a list of current exhibitions, events (including opening receptions—free eats!) and upcoming visits by established and emerging artists of national and international significance.

In addition to art inside the museum, the Ulrich also is known for its outdoor sculpture collection. More than 70 works of art can be found on WSU’s 330-acre campus. Free maps of the outdoor sculpture collection are available at the museum’s main desk.

Students at Wichita State University receive a FREE membership to the Ulrich; stop by the museum with your Shocker Card to activate your membership. The museum is open from 11 a.m. to 5 p.m. Tuesday–Friday and 1 to 5 p.m. Saturdays and Sundays. Admission is always free.

Interested in scheduling a guided tour for your class? Want to volunteer? Other questions? Call the Ulrich Museum of Art at (316) 978-3664 or e-mail ulrich@wichita.edu.
W. Frank Barton School of Business

Offices: 100 Clinton Hall
John M. Beehler, dean
James Clark, associate dean
Kate Kung-McIntyre, assistant dean, undergraduate student support services

Departments
Economics, (316) 978-3220—Jen-Chi Cheng, chairperson
Finance, Real Estate, and Decision Sciences, (316) 978-3219—Rick LeCompte, chairperson
Management, (316) 978-6492—Nancy A. Bereman, chairperson
Marketing and Entrepreneurship, (316) 978-3367—Dean E. Headley, chairperson
School of Accountancy, (316) 978-3215—Jeffrey J. Bryant, director

Graduate Faculty
School of Accountancy
Profs: Paul D. Harrison, Bill J. Darnagin
Assoc Profs: Jeffrey J. Bryant (director), Jeffrey J. Quirin
Asst Profs: Richard Alltizer, Thomas S. Pfannestiel

Economics
Profs: Dong W. Cho, Philip L. Hersch, Martin M. Perline
Assoc Profs: Jen-Chi Cheng (chairperson), James E. Clark (associate dean), Maurice Piennestiel
Asst Profs: Jodi Messer, William Miles

Finance, Real Estate, and Decision Sciences
Profs: W. Barley Hildreth (Regents Distinguished Professor)
Assoc Profs: Sue Abdinour-Helm, Richard L.B. LeCompte (chairperson), Stanley D. Longhofer (director, Center for Real Estate)
Asst Profs: Mehmet Barut, Rodney Boehme, Timothy Craft, Gordon Deplede, Achita Mathur, Larry Spurgeon

Management
Endowed Prof: Gerald H. Graham (R.P. Clinton Distinguished Professor of Management)
Professor: Dharmar deSilva (director, Center for International Business)
Assoc Professors: Sam Beldona, Nancy A. Bereman (chairperson), Steve Farmer, Timothy Pett, James A. Wolff

Marketing and Entrepreneurship
Professor: Charles L. Martin
Assoc Professors: Vincentia Claycomb, Donald W. Hackett, Dean E. Headley (chairperson), Stephen Porter, 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 our mission, we are 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 institution, 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 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 has 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 quality and quantity of students.

Faculty: Faculty members 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 metropolitan 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), Master of Accountancy (MACC), and the Master of Arts (MA) in economics.

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 emphases on communication skills, mathematics, and economics, and includes a broad exposure to the different aspects of business and management.

The School of Accountancy recognizes students need 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 AIS concentration satisfies students’ need for increasing technical competence in the area of accounting systems analysis, development, and implementation. The taxation concentration focuses on advanced issues in taxation, including the area of research.

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 your bachelor’s degree is in accounting, then basically you would have one more year of full-time study to obtain the MACC degree.

Admission Requirements
Admission to the MACC professional curriculum is available to (1) qualified students who have not yet completed a bachelor’s degree, and (2) qualified students who have completed a bachelor’s degree (not necessarily in business or accounting) from an accredited college or university.

Full admission to the MACC professional curriculum, for students who have not yet completed a bachelor’s degree, requires:
1. Completion of the preprofessional curriculum described below:
2. A minimum grade point average of 2.750 on all courses identified as Barton School of Business core courses.
3. A minimum grade point average of 3.000 on the following courses: ACCT 310, 320, 410, and 430.
4. A total of 1,100 points based on the formula of 200 times the overall grade point average on the last 60 hours plus the GMAT score. The GMAT must have been taken within the last six years.

Students who meet all the requirements above, except are lacking no more than 9 hours of preprofessional curriculum, may be admitted on a conditional basis. These 9 hours must be completed in the first semester following conditional admission or as soon thereafter as course scheduling permits.

Students holding a bachelor’s degree in any field (not necessarily business or accounting) from a regionally accredited institution may be admitted to the School of Accountancy if they meet the minimum scholastic requirements (a total of 1,100 points based on the formula of 200 times the overall grade point average on the last 60 hours plus the GMAT score or a total of 1,050 points based on the formula of 200 times the overall grade point average on the last 60 hours plus the GMAT score). They will be expected to take courses covering any portion of the preprofessional curriculum for which they have not had an equivalency as soon as practicable.

All students are required to meet with the School of Accountancy’s graduate advisor prior to beginning coursework.

**Probationary Admission—All Students**

Students who do not meet the minimum GMAT and/or grade point requirements may be admitted to probationary status by the director on the basis of sufficient academic record. Students who do not meet the minimum GMAT and/or grade point requirements may be admitted to probationary status by the director on the basis of sufficient evidence that they can satisfactorily complete the MACC program requirements and have the potential for a successful career in professional accounting.

### 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 semester hours of accounting courses numbered 800 or above and a total of 21 semester hours in courses numbered 800 or above**.

In general, we presume an undergraduate degree in business and an accounting major, equivalent to that offered at WSU. 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:

<table>
<thead>
<tr>
<th>Courses</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 260, Introduction to Information Processing Systems</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 310, 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</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>BLAW 431, LEGAL Environment of Business, or BLAW 435, Law of Commercial Transactions, or BLAW 436, Law of Business Associations</td>
<td>3-6</td>
</tr>
<tr>
<td>D S 350, Introduction to Production and Operations Management</td>
<td>3</td>
</tr>
<tr>
<td>M I S 495, Management Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>ECON 201, Principles of Micro-Economics</td>
<td>3</td>
</tr>
<tr>
<td>ECON 202, Principles of Micro-Economics</td>
<td>3</td>
</tr>
<tr>
<td>ECON 231, Introductory Business Statistics</td>
<td>3</td>
</tr>
<tr>
<td>FIN 340, Financial Management I</td>
<td>3</td>
</tr>
<tr>
<td>MGMT 360, Management and Organizational Behavior</td>
<td>3</td>
</tr>
<tr>
<td>I B 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>

The following graduate-level coursework must be completed:

<table>
<thead>
<tr>
<th>Courses</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<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</td>
</tr>
</tbody>
</table>

#### 2. The candidate must complete a minimum of 24 hours of the following Barton School of Business core requirements:

<table>
<thead>
<tr>
<th>Courses</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 260, Introduction to Information Processing Systems</td>
<td>3</td>
</tr>
<tr>
<td>BLAW 431, LEGAL Environment of Business, or BLAW 435, Law of Commercial Transactions, and BLAW 436, Law of Business Associations</td>
<td>3-6</td>
</tr>
<tr>
<td>D S 350, Introduction to Production and Operations Management</td>
<td>3</td>
</tr>
<tr>
<td>M I S 495, Management Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>FIN 340, Financial Management I</td>
<td>3</td>
</tr>
<tr>
<td>I B 333, International Business</td>
<td>3</td>
</tr>
<tr>
<td>MGMT 360, Management and Organizational Behavior</td>
<td>3</td>
</tr>
</tbody>
</table>

#### 3. The candidate must complete the following courses required by the School of Accountancy:

<table>
<thead>
<tr>
<th>Courses</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT 210, 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>
<tr>
<td>ACCT 840, Advanced Principles of Auditing</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 860, Advanced Accounting Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>Graduate electives outside accounting</td>
<td>9</td>
</tr>
<tr>
<td>Other graduate electives (accounting or non-accounting)</td>
<td>6</td>
</tr>
</tbody>
</table>

### Students Not Possessing a Bachelor’s Degree

**At Time of Admission**

**Preprofessional Curriculum**

Students pursuing the Master of Accountancy (MACC) are required to meet specified requirements for admission to the School of Accountancy. During the candidate’s undergraduate work, the following requirements must be met:

1. The candidate must complete the general education requirements for Wichita State University, plus additional non-business courses for 63 semester hours. Students planning to sit for the CPA exam are encouraged to take an upper-division economics course as part of the non-business courses. The following courses are specifically required by the School of Accountancy and may be counted within this 63 hours:

<table>
<thead>
<tr>
<th>Courses</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<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>BLAW 431, LEGAL Environment of Business</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, Introductory Business Statistics</td>
<td>3</td>
</tr>
<tr>
<td>ECON 232, Statistical Software Applications</td>
<td>2</td>
</tr>
<tr>
<td>COMM 111, Basic Public Speaking</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 210, Composition: Business, Professional, and Technical Writing</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>

2. The candidate must complete a minimum of 24 hours of the following Barton School of Business core requirements:

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<tr>
<td>D S 350, Introduction to Production and Operations Management</td>
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<td>M I S 495, Management Information Systems</td>
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<td>I B 333, International Business</td>
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<td>3</td>
</tr>
<tr>
<td>MKT 300, Marketing</td>
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</tr>
</tbody>
</table>

3. The candidate must complete the following courses required by the School of Accountancy:

<table>
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<tr>
<th>Courses</th>
<th>Hrs.</th>
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</thead>
<tbody>
<tr>
<td>ACCT 210, Financial Accounting and Reporting: Contemporary Issues</td>
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<tr>
<td>ACCT 835, Tax Research and Selected Topics</td>
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</tr>
<tr>
<td>ACCT 840, Advanced Principles of Auditing</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 860, Advanced Accounting Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>Graduate electives outside accounting</td>
<td>9</td>
</tr>
<tr>
<td>Other graduate electives (accounting or non-accounting)</td>
<td>6</td>
</tr>
</tbody>
</table>

### Professional Curriculum

Candidates in the professional curriculum who have completed the minimum preprofessional curriculum outlined above, must complete 54 credit hours in the following courses while maintaining an overall grade point average of 3.00 or better.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<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</td>
</tr>
</tbody>
</table>

During the semester in which the preprofessional curriculum will be completed, the candidate for the MACC must apply for admission to the Graduate School. The GMAT should be taken during, or just prior to, this semester.

A bachelor’s degree will be awarded at the time of conferring the MACC degree.
**Master of Business Administration**

The Barton School of Business offers the Master of Business Administration (MBA) through faculty in the accounting; economics; finance, real estate, and decision sciences; management; and marketing and entrepreneurship departments, as well as in other colleges of the university. The MBA program is designed to prepare men and women for responsible positions of professional leadership in business, government, health-related organizations, and other institutions. The program concentrates on general management, with particular attention given to developing within the student an understanding of the organization as an integrated system. Areas of concentration are available for those students wishing to focus their elective coursework in a specialized area. Concentration areas currently available are finance, marketing, entrepreneurship, operations management, and health care administration.

The total hours required of students and the level at which they begin participation in the MBA program depend on their academic preparation. The total number of hours required for completion of an MBA ranges from 36 to 48.

Most of the courses that can be taken for graduate credit and almost all of those on the 800 level are offered in the evening.

**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 skills necessary to assume positions of leadership.

Admissions decisions are based on the following:
- 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.
- "Personal Goals" essay that clearly articulates the applicant's reasons for seeking admission (500 words maximum).
- Two reference forms completed by faculty, employer, or suitable referee.
- 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.

Applications for degree admission are reviewed twice a year, in the fall and spring. Deadlines for submitting applications to the Graduate School are 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**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT 620</td>
<td>Accounting for Strategic Support and Performance Evaluation</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 630</td>
<td>Taxation of Business Entities</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 640</td>
<td>Principles of Auditing</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 815</td>
<td>Financial Accounting and Reporting: Contemporary Issues</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 825</td>
<td>Management Control Systems</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 835</td>
<td>Tax Research and Selected Topics</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 840</td>
<td>Advanced Principles of Auditing</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 860</td>
<td>Advanced Accounting Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>MGMT 885</td>
<td>Advanced Strategic Management</td>
<td>3</td>
</tr>
</tbody>
</table>

**Electives must be selected to conform to AACSB standards for business core knowledge. A minimum of 155 credit hours (undergraduate and graduate) is required.**

**Concentrations in Master of Accountancy Degree Program**

**Accounting Information Systems**

Students electing a concentration in accounting information systems (BITS) must take the following courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT 600</td>
<td>Tech., Risk Mgmt., Sec. &amp; Control</td>
<td>3</td>
</tr>
<tr>
<td>One 600-or 800-level MIS course selected with consent of graduate advisor</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Graduate electives, including 6 hours outside of accounting</td>
<td>9</td>
<td></td>
</tr>
</tbody>
</table>

**Taxation**

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

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT 600</td>
<td>Taxation of Business Entities—Advanced Topics</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 831</td>
<td>Taxation of Estates and Gifts</td>
<td>3</td>
</tr>
<tr>
<td>Graduate electives, all outside of accounting</td>
<td>9</td>
<td></td>
</tr>
</tbody>
</table>

*Students may substitute one tax class (either ACCT 630 or 892) for either ACCT 815, 825, 840, or 860 with consent of the School of Accountancy.*

**Required Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT 815</td>
<td>Taxation of Business Entities</td>
<td>3</td>
</tr>
<tr>
<td>ECON 804</td>
<td>Managerial Accounting</td>
<td>3</td>
</tr>
<tr>
<td>FIN 855</td>
<td>Managerial Finance</td>
<td>3</td>
</tr>
<tr>
<td>MGMT 803</td>
<td>Business Decision Making and Analysis</td>
<td>3</td>
</tr>
<tr>
<td>MKT 801</td>
<td>Marketing Management</td>
<td>3</td>
</tr>
<tr>
<td>MGMT 862</td>
<td>Organizational Behavior</td>
<td>3</td>
</tr>
<tr>
<td>MGMT 885</td>
<td>Advanced Strategic Management</td>
<td>3</td>
</tr>
</tbody>
</table>

**Electives**

Students may substitute one tax class (either ACCT 630 or 892) for either ACCT 815, 825, 840, or 860 with consent of the School of Accountancy.

- **See list of courses under Preprofessional Curriculum. Core courses taken after admission to the MACC program must be graduate-level equivalent courses.**
- **Electives must be selected to conform to AACSB standards for master's in accounting programs. See the graduate coordinator of the School of Accountancy for assistance in making selections.**

**BARTON SCHOOL OF BUSINESS 35**
D S 850, Operations Management .......... 3
MIS 874, Management Information Systems .. 3
Electives ........................................ 9

* These courses are to be taken only if a specific void exists.
** With approval of the program director, equivalent credit may be granted for courses of equal content taken in an undergraduate or graduate program. See Advanced Standing section above.

**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, D S 850, ECON 804, FIN 850, MGMT 803 or MKT 803, MGMT 882, MGMT 885, MKT 801, M 158 874, 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 course work 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 elective from list B.

**List A:**
- DS 655, Project Management
- DS 679, Spreadsheet Mod. for Decision Making
- DS 860, Enterprise Resource Planning
- DS 865, Supply Chain Management (or I EN 780)

**List B:**
- DS 851, Advanced Operations Management
- DS 876, Advanced Management Science
- DS 890, Special Topics
- MIS 650, Knowledge Management
- MIS 884, Database Planning Management

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**

The MBA—Entrepreneurship 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 development 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; and writing business plans. The specialized knowledge helps students understand the business startup process and related managerial issues.

The entrepreneurship concentration requires 9 semester hours of course work from a specified list of courses. Students may take no more than two 600- or 700-level courses.

Course requirements for the concentration in entrepreneurship:

- **Required**
  - ENTR 868, New Venture Feasibility Seminar or equivalent

- **Elective**
  - ENTR 608/MKT 608, Selling and Sales Force Management
  - ENTR 620, Growing and Managing an Entrepreneurial Firm
  - ENTR 869, Corporate Entrepreneurship
  - MKT 805, Consumer Decision Processes

**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. Our 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 semester hours of course work 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**
  - ENTR 868, New Venture Feasibility Seminar or equivalent

- **Elective**
  - ENTR 868, New Venture Feasibility Seminar or equivalent

  - **FIN 860, Cases in Financial Management and Investments**
  - **FIN 821, Investment Analysis and Portfolio Management**
  - **FIN 822/ECON 847, Risk Management with Options and Futures**
  - **FIN 625/ECON 674, International Finance**
  - **FIN 830, Financial Institutions and Markets**
  - **FIN 870, Financial Modeling**

**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 semester hours of course work from a specified list of courses.

Course requirements for the concentration in health care administration:

- **Required**
  - ENTR 868, New Venture Feasibility Seminar or equivalent

- **Elective**
  - ENTR 868, New Venture Feasibility Seminar or equivalent

  - **PHS 812, Health Care Policy and Administration**
  - **PHS 814, Social and Behavioral Aspects of Public Health**
  - **PHS 750B, Geographic Information Systems in Community Epidemiology**
  - **PHS 826, Politics of Health Policy Making**
  - **PHS 831, Essentials of Health Insurance and Managed Care**
  - **PHS 833, Health Economics**
  - **PHS 834, Financing Health Care Services**
  - **PHS 835, Organization, Financing, and Delivery of Health 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
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>
</tr>
</thead>
<tbody>
<tr>
<td>EMBA 800, Quantitative Decision Methods for Executives</td>
<td>3</td>
</tr>
<tr>
<td>EMBA 801, Human Behavior and the Management of Organizations</td>
<td>3</td>
</tr>
<tr>
<td>EMBA 802, Marketing for Executive Management</td>
<td>3</td>
</tr>
<tr>
<td>EMBA 803, Economic Analysis for Executives</td>
<td>3</td>
</tr>
<tr>
<td>EMBA 804, Global Business and Competitiveness for Executives</td>
<td>3</td>
</tr>
<tr>
<td>EMBA 805, Operations Management for Executives</td>
<td>3</td>
</tr>
<tr>
<td>EMBA 806, Financial Statement Analysis for Executive Management</td>
<td>3</td>
</tr>
<tr>
<td>EMBA 807, Corporate Finance for Executive Management</td>
<td>3</td>
</tr>
<tr>
<td>EMBA 808, Managerial Accounting for Executive Management</td>
<td>3</td>
</tr>
<tr>
<td>EMBA 809, Information Technology for Executives</td>
<td>3</td>
</tr>
<tr>
<td>EMBA 810, Organizational Investment Strategies for Executives</td>
<td>3</td>
</tr>
<tr>
<td>EMBA 811, Competitive Strategy for Executive Management</td>
<td>3</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

- Academic four-year undergraduate degree from a regionally accredited institution.
- Admission based primarily on grade point average (GPA) and background in economics.
- Admission to full standing requires a GPA of 2.750 for the last 60 hours of course work and all courses in economics and required mathematics.
- Must have completed intermediate level macro- and microeconomics, plus one course in calculus and one in statistics, all with a grade of C or better. These course deficiencies can be made up during the first year.
- The Graduate Record Examination (GRE) is not required.
- 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 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.

Core courses—15 hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 702, Mathematical Methods in Economics</td>
<td>3</td>
</tr>
<tr>
<td>ECON 731, Applied Econometrics I</td>
<td>3</td>
</tr>
<tr>
<td>ECON 801, Macroeconomic Analysis</td>
<td>3</td>
</tr>
<tr>
<td>ECON 802, Microeconomic Analysis</td>
<td>3</td>
</tr>
<tr>
<td>ECON 804, Managerial Economics (option not available in economic analysis track)</td>
<td>3</td>
</tr>
<tr>
<td>ECON 803, Analysis of Business Conditions and Forecasting</td>
<td>3</td>
</tr>
<tr>
<td>ECON 851, Applied Econometrics II</td>
<td>3</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIN 850, Managerial Finance</td>
<td>3</td>
</tr>
<tr>
<td>ECON 740, Monetary Problems and Policy</td>
<td>3</td>
</tr>
</tbody>
</table>
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 . 3
ECON 674, International Finance (cross-listed as FIN 625) . 3
ECON 870, International Finance and Investment . 3
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 and 260 with a grade of C 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 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 competitive and/or competitive advantages. Focuses on goal-congruent strategies and incentives. Prerequisites: completion of ACCT 560 with a grade of C or better, advanced standing, junior standing.

ACCT 630. Taxation of Business Entities (3). Studies the federal tax law as it applies to corporations, partnerships, S corporations, and tax-exempt entities. Examines the effect of taxation on business decisions. Prerequisites: completion of ACCT 630 with a grade of C 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 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). Prepares students for professional certification examinations in accounting, including the CPA, CMA, and CIA examinations. Enrollments govern whether course is offered. Graded S/U and may be repeated for credit. Registration for up to 6 semester hours is permitted. Credit for this course does not count for degree credit in the School of Accountancy or Barton School of Business. Prerequisite: 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. 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/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 courses.

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 decedents, 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 560 (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: 3.00 GPA in accounting, graduate standing, and School of Accountancy consent.

Business Law (BLAW)
Department of Finance, Real Estate, and Decision Sciences

Courses for Graduate/Undergraduate Credit

BLAW 635. Law of Commercial Transactions (3). Law of contracts, bailments, sales, commercial paper, and secured transactions. Centers on the Uniform Commercial Code. Credit will not be granted for both BLAW 435 and 635. Prerequisites: 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. Prerequisite: junior standing, advanced standing.

BLAW 690. Seminar in Selected Topics (1-3). 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, and 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. Utilizes a software tool. Prerequisites: DS 350 or instructor consent.

DS 660. Enterprise Systems (3). Introduces the underlying need for integration in organizations that have traditionally operated with fragmented information systems. The focus will be on ERP (Enterprise Resource Planning) systems, but other e-commerce systems will be discussed. Includes an overview of ERP systems, business processes, and implementation issues. Covers relevant software packages. Prerequisites: junior standing, advanced standing, and DS 350, or instructor consent. Not open to students with credit in DS 860.

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. Prerequisites: junior standing, advanced standing, and DS 350, or instructor consent. Not open to students with credit in DS 865.

DS 675. Spreadsheet Modeling for Decision Making (3). 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. Prerequisites: junior standing and DS 350, or instructor consent. Not open to students with credit in DS 875.

DS 690. Seminar in Selected Topics (1-3). Repeatable with departmental consent. Prerequisites: 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 interferes 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). This is an 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 will learn how software, like SAP if available, can perform Operations Management tasks. Case studies will be used. Prerequisite: DS 850 or equivalent.

DS 860 ERP-Enterprise Resource Planning (3). This course 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. Topics covered include the ERP Life Cycle for Implementation and Change Management. Students will get hands-on exercises with ERP software, like SAP, if available. Prerequisite: DS 850 or equivalent.

DS 865. Supply Chain Management (3). This course introduces concepts, models, and solution approaches critical to managing a supply chain. The focus will be on understanding how supply chain design and operation impact the performance of the company and its competitive advantage. Topics covered include strategy development, profitability, demand forecasting, inventory management, facility location, warehousing, transportation, network design, and information sharing. Prerequisite: DS 850 or equivalent.

DS 875. Management Science (3). This course gives an 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. The 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 605. History of Economic Thought (3). A critical analysis of economic thought, the factors that influence this thought and its impact upon the social and economic development of the modern world. Prerequisites: for undergraduate students, ECON 201, 202, and junior standing; for graduate students, the equivalent of ECON 201 and 202.

ECON 611. Economics of Sports (3). An 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 614. Industrial Economics and Antitrust Policy (3). Examines the behavior of firms within industries emphasizing antitrust policy. Includes pricing behavior, distribution policies, entry deterrence, advertising, and mergers. Prerequisites: for undergraduate students, ECON 201, 202, and junior standing; for graduate students, the equivalent of ECON 201 and 202.

ECON 615. Economics of Transportation (3). A study of how businesses can effectively use transportation both nationally and internationally. Includes the physical and economic characteristics of transportation modes, basic concepts of logistics, and problems and policies related to transportation. Prerequisites: for undergraduate students, ECON 201, 202, and junior standing; for graduate students, the equivalent of ECON 201 and 202.

ECON 617. Economics of Regulation (3). A study of the theory and practice of regulation. Includes both the traditional regulation of public utilities and communications and the newer forms of regulation, such as safety and environmental regulations. Prerequisites: for undergraduate students, ECON 201, 202, and junior standing; for graduate students, the equivalent of ECON 201 and 202.

ECON 622. Comparative Economic Systems (3). A comparative analysis of the evolutionary structure of capitalism, socialism, and communism. Emphasizes differences in pricing resource allocation, distribution of income, and economic planning. Prerequisites: for undergraduate students, ECON 201, 202, and junior standing; for graduate students, the equivalent of ECON 201 and 202.

ECON 625. Economic History of Europe (3). An analysis of the development of economic institutions; the rise of capital-
ism 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. An 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). An 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 661. Collective Bargaining and Wage Determination (3). An examination of economic and legal aspects of collective bargaining and the major issues and problems inherent in the bargaining process. Explores the manner in which wages are determined under various institutional relationships and the effects of collective bargaining on wages, employment, and prices. Prerequisites: for undergraduate students, ECON 201, 202, and junior standing; for graduate students, the equivalent of ECON 201 and 202.

ECON 662. Work and Pay (3). Investigation of the economic aspects of work and pay emphasizing the nature of work under capitalism and the manner in which wages are determined. Covers quality of work life, labor force participation and mobility, labor market discrimination, and various wage theories. 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, disablement, 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 671. Economic Growth and Development (3). Survey of leading growth theories, emphasizing the processes of development and capital formation in developed and underdeveloped economies. Analyzes determinants of real income, resource allocation, investment criteria, balance of payment problems, national policies, and related topics within this framework. 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, and junior standing; for graduate students, the equivalent of ECON 201 and 202.

ECON 675. 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 677. Comparative Economic Systems (3). An analysis of economic performance, development, and growth in different economic systems. Includes traditional economies, socialist economies, and mixed economies. Prerequisites: for undergraduate students, ECON 201, 202, junior standing; for graduate students, the equivalent of ECON 201 and 202.

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). An 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 800 or equivalent and one semester of introductory statistics.

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

ECON 831. Applied Econometrics II (3). Introduces mathematical methods 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 871. Applied Econometrics I (3). A study of 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 870. 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 840. Seminar in Monetary Theory (3). An examination of classical and contemporary monetary theories. Includes an analysis and an evaluation of current monetary problems. Repeatable for credit with departmental consent. Prerequisites: 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: FIN 840 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. Prerequisites: ECON 765 or instructor's consent.

ECON 870. International Finance and Investment (3). A case study of the contemporary and business-related issues of international finance and investment. Includes foreign exchange markets, European integration, international trade organizations and monetary systems, and emerging markets. Prerequisite: one of the following courses: ECON 672 or 674, MGMT 561, or FIN 625.

ECON 891. Directed Study (1-3). Individual study of various aspects and problems of economics. Repeatable for credit with departmental consent. Prerequisites: graduate standing and departmental consent.

ECON 892. Group Studies in Economics (1-3). Repeatable for credit. Prerequisite: departmental consent.

ECON 896. Thesis (1-2).

Entrepreneurship (ENTR)
Department of Marketing and Entrepreneurship

Courses for Graduate/Undergraduate Credit

ENTR 608. Selling and Sales Force Management (3). Cross-listed as MKT 608. An analysis of current behavioral concepts of personal selling and the problems and policies involved in managing a sales force. Prerequisites: MKT 300, junior standing, advanced standing.


ENTR 620. Growing and Managing an Entrepreneurial Firm (3). Focuses on the organization, operation, marketing, and financial management of an on-going entrepreneurial firm. Emphasizes the strategic management of growth associated with a rapidly changing business, as distinguished from "small business management," which could include small enterprise units that are static. Teaches the practical aspects of managing a growing business on a day-to-day basis. Practical application to "intrapreneurship," such as growing a division or department within a larger organization. Prerequisites: ENTR 300C, and junior standing or instructor's consent, advanced standing.

ENTR 668. Developing a Successful Business Plan (3). Emphasizes the development of a comprehensive business plan which incorporates financial and organizational principles associated with entrepreneurial finance including financial structuring of the firm, pro forma development of financial statements and the capitalization of the firm. Explains and illustrates strategies for exiting and harvesting the business. Prerequisites: ENTR 420, senior standing, or instructor's consent, advanced standing.

ENTR 690. Special Topics in Entrepreneurship (3). Advanced course with in-depth study of emerging topics in entrepreneurship. Repeatable with instructor consent. Prerequisites: ENTR 301C, junior standing or instructor's consent, advanced standing.

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

Courses for Graduate Students Only

ENTR 812. Introduction to Total Quality Management (3). Cross-listed as MGMT 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.

ENTR 868. New Venture Feasibility Seminar (3). Focuses on directing students in the appropriate methods of selecting financial sources and in raising seed capital through the preparation of a comprehensive feasibility study. Covers (1) sources of capital, such as venture capitalists, investment bankers, banks, and creative forms of financing; (2) marketing opportunity analysis; (3) pro forma development; (4) feasibility decision making; and (5) actual preparation of the loan package. Prerequisites: ACCT 810 or its equivalent, or instructor's consent. Not open to students with credit in ENTR 668.

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 consent.

ENTR 891. Directed Studies (1-5). Prerequisite: instructor consent.

Executive Master of Business Administration (EMBA)
Graduate Studies in Business

Courses for Graduate Students Only

EMBA 800. Quantitative Decision Methods for Executives (3). Introduces methods of statistical inference, emphasizing applications to administrative and management decision problems. Includes classical estimation and hypothesis testing, regression, correlation, analysis of variance, and non-parametric methods. Prerequisite: admission to EMBA program.

EMBA 801. Human Behavior and the Management of Organizations (3). 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 (3). 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 Executive MBA program.

EMBA 803. Economic Analysis for Executive Management (3). 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 Executive MBA program.

EMBA 804. Operations Management for Executives (3). 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 Executive MBA program.

EMBA 805. Global Business and Competitiveness for Executives (3). 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 Executive MBA program.
EMBA 806. Financial Statement Analysis for Executive Management (3). Focuses on the nature and purpose of accounting, principal accounting instruments, and valuation problems. Prerequisite: admission to Executive MBA program.

EMBA 807. Corporate Finance for Executive Management (3). 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 Executive MBA program.

EMBA 808. Managerial Accounting for Executives (3). 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 Executive MBA program.

EMBA 809. Information Technology for Executives (3). 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 Executive MBA program.

EMBA 810. Organizational Investment Strategies for Executives (3). Focuses on investment management, asset pricing models, factor models, performance assessment, option pricing, and other derivative securities. Prerequisite: admission to Executive MBA program.

EMBA 811. Competitive Strategy for Executive Management (3). Integrates the other courses in the program by addressing the strategic management of an organization. Focuses on developing a strategic plan that maximizes shareholder value, generates commitment and effective action from others in the organization for implementing the plan, and developing a strategy consistent with the organization’s resources while increasing shareholder value by satisfying customers better than do competitors. Prerequisite: admission to Executive MBA program.

Finance (FIN)

Department of Finance, Real Estate, and Decision Sciences

Courses for Graduate/Undergraduate Credit

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, 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, 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, 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, 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, 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, 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, junior standing, advanced standing.

FIN 660. Cases in Finance (3). An exploration of the problems and operations for which the financial officer is responsible, emphasizing controversial aspects of financial analysis. This is the capstone course in the finance major and should be taken at the end of a finance program. Prerequisites: FIN 340, 440, junior standing, advanced standing.

FIN 690. Seminar in Selected Topics (1-5). Repeatable with departmental consent. Prerequisites: FIN 340, junior standing, advanced standing.

Courses for Graduate Students Only


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: FIN 840 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: FIN 840 or equivalent.


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

FIN 890. Seminar in Special Topics (1-3). Repeatable with departmental consent. Prerequisite: FIN 840.

FIN 891. Directed Studies (1-6). Prerequisite: FIN 840 and departmental consent.

Human Resource Management (HRM)

Department of Management

Courses for Graduate/Undergraduate Credit

HRM 664. Labor Relations (3). Presents the philosophy underlying labor legislation and the function of collective bargaining in labor-management relationships. Prerequisite: 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 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. Prerequisite: 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 888. Strategic Reward Systems (3). A study of 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: junior standing, advanced standing.

IB 600. International Management (3). An overview of international business including strategy and organizational behavior. Equips 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 360, 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, junior standing, advanced standing.

IB 625. International Financial Management (3). Cross-listed as ECON 674 and FIN 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, ECON 201, 202, or 800; junior standing, advanced standing.

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

Courses for Graduate Students Only

IB 836. International Business and 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 891. Directed Studies in IB (1-6). Prerequisite: departmental consent.

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

Management (MGMT)

Department of Management

Courses for Graduate/Undergraduate Credit

MGMT 660. Designing Effective Organizations (3). Studies how work and workers can be structured to best accomplish the goals of an organization. Explores the interplay of design, technology, strategy, and environment, and discusses frameworks that promote growth, market responsiveness, innovation, and global competitiveness. Emphasizes skills necessary for managing change for maximum effectiveness of individuals, work groups, and the organization as a whole. Prerequisites: MGMT 360, junior standing, advanced standing.

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 work force 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 663. Building Effective Work Teams (3). Significant changes in the business environment have motivated widespread support for the use of teams to accomplish work-related tasks. Course promotes an understanding of the organizational context of a team culture through an analysis of how teams form and group processes that enhance goal accomplishment. Emphasizes skills necessary to manage the organization’s culture, improve group performance, and increase collaboration among team members. Prerequisites: MGMT 360, junior standing, advanced standing.

MGMT 680. Making Effective Decisions (3). A study of the theories of decision making with attention to the factors of creativity, the quest for subjective certainty, rationality, cognitive inhibitors, problem identification, evaluation of alternatives, applications of qualitative methods to decision processes, and decision implementation. 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 330, 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 and MKT 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 course work 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 (1-3). Repeatable for credit 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, and 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: MIS 310, 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 450, junior standing, advanced standing.

MIS 610. Database and Web Programming (3). Uses ASP.NET 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 a ADO and Implementing Security in ASP. Prerequisites: MIS 325 and MIS 450, 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 450, junior standing, advanced standing.

MIS 666. 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 450 (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 links 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, assured 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.

Marketing (MKT)

Department of Marketing and Entrepreneurship

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 marketing systems on the design of marketing programs. Prerequisites: MKT 300, junior standing, advanced standing.

MKT 607. Promotion Management (3). An analysis of all issues involved with the promotion of an organization and its products or services. Students develop coordinated marketing strategies in the areas of advertising, personal sales, public relations, and special promotional activities such as direct marketing, interactive media, and sales promotions. Prerequisites: MKT 300, junior standing, advanced standing.

MKT 608. Selling and Sales Force Management (3). Cross-listed as ENTR 608. An analysis of current behavioral concepts of personal selling and the problems and policies involved in managing a sales force. Prerequisites: MKT 300, advanced standing.

MKT 609. Marketing Programs (3). A study of all the aspects of the marketing mix that are integrated to make an effective and coordinated marketing program. Prerequisites: MKT 300, 6 additional hours of marketing, junior standing, advanced standing.

MKT 690. Seminar in Selected Topics (1-3). Repeatable with instructor 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: MKT 800 or equivalent.

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 of the factors that help explain their behavior. Includes an analysis of current concepts and models. Prerequisite: MBA 801 or instructor consent.

MKT 890. Seminar in Special Topics (1-3). Repeatable with instructor 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 Cr/NCr 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 advisor.

MBA 801. MBA Basics: Management and 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 course work. Secondly, builds oral and written communication skills necessary for success in the MBA curriculum and beyond. Prerequisites: graduate standing and permission of Barton School Graduate Studies in Business advisor.

Real Estate (RE)

Department of Finance, Real Estate, and 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 or instructor consent, 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 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 or instructor consent, 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 consent; junior standing; advanced standing.

RE 690. Seminar in Selected Topics (1-3). 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.
Notes
College of Education

Offices: 104 Corbin Education Center
Jon M. Engelhardt, dean
Randolph A. Ellsworth, associate dean for administration and technology
Lori Miller, associate dean for teacher education

Departments
Counseling, Educational, and School Psychology: (316) 978-3326
Educational Leadership: (316) 978-3325
Curriculum and Instruction, (316) 978-3322
Kinesiology and Sport Studies, (316) 978-3340

The College of Education offers programs leading to the Master of Education (MEd) in counseling, curriculum and instruction, educational leadership, educational psychology, exercise science, sport administration, and special education; the Specialist in Education (EdS) in school psychology; and the Doctor of Education (EdD) in educational leadership.

Graduate offerings include courses which help students meet requirements for state licensure or licensure as principals, supervisory personnel, 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 administration and exercise-related programs at all age levels.

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 since some program admissions are determined by a faculty committee once each year or once each semester. 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 course work (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.

Degree Requirements
Each program of study specifies the number of semester hours of graduate course work 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 websites.

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 advisor 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 advisor.

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/nondegree graduate students may pursue initial licensure as a teacher (Pre K-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.

Counseling, Educational, and School Psychology
Graduate Faculty
Professors: Linda Bakken, Randolph A. Ellsworth (associate dean), W.C. Joseph Mau, James J. Rhatigan (senior vice president), Charles A. Romig, Marlene Schommer-Aikins
Associate Professors: Ruth A. Hitchcock, Nancy A. McKellar
Assistant Professors: Abiola Dipeolu

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.

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 course work and a written comprehensive examination. The thesis option in counseling requires 54 credit hours of course work plus an oral examination over the thesis. For state licensure recommendation in professional school counseling, 46 credit hours are required under the non-thesis plan and 54 credit hours are required under the thesis plan.

The MEd in educational psychology may be earned under a thesis or non-thesis option. The non-thesis option requires 36 credit hours of course work and a written comprehensive examination. The thesis option requires 32 credit hours of course work 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.

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
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 course work (including any post-bachelor's graduate work). They must also submit: (a) names, addresses, and telephone numbers of three people to serve as 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. For those students whose career goals include school counseling in Kansas: in order to be recommended for a conditional license as a school counselor, a student must have a valid Professional-level teaching license. They must also have been admitted to and completed the MEd in counseling degree program at the 46-credit-hour non-thesis level or at the 54-credit-hour thesis level.

**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 course work; 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{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 combined verbal and quantitative scores on the GRE of 1,000 and a B average (3.00) over the last 60 credit hours of undergraduate course work.}
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**Specialist in Education Requirements**

The Specialist in Education (EdS) in school psychology requires 39 credit hours of course work beyond the MEd. The degree is awarded upon completion of course work and practice. For full licensure in school psychology, students must apply for a conditional 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 (unless applicant already completed a master's thesis); 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. Undergraduate grade point average (GPA) and Graduate Record Examination (GRE) scores will be evaluated using the following index:

\[
\text{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 (3.00) over the last 60 credit hours of undergraduate course work.}
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**Endorsement Requirements**

**School Counseling**

The school counseling endorsement program requires 32 credit hours of course work. For state licensure recommendation, students must have five years of full-time teaching experience. Applicants must have a minimum 3.00 grade point average for the last 60 hours of course work (including post-bachelor's graduate work). They must submit: (a) evidence of a current teaching certificate; (b) evidence of completion of a master's degree in a related field; (c) names, addresses, and telephone numbers of three people to serve as references; (d) a statement of professional goals; (e) a resume; and (f) evidence of completion of 9 credit hours of undergraduate psychology, plus 6 additional hours in the behavioral sciences.

**State Licensure Programs**

The Department of Counseling, Educational, and School Psychology provides degree programs and coursework that lead to State of Kansas certification endorsement in the following areas:

- School Counselor
- School Psychologist

**Counseling, Educational, and School Psychology (CESP)**

**Courses for Graduate/Undergraduate Credit**

**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.
other institutional settings. Prerequisite: admission to counseling program or instructor's consent.

CESP 808. School Psychology Professional Issues (3). Examines roles and functions of school psychologists within the context of historical foundations of the profession. Uses lecture, discussions, observations in schools, and presentations by field-based school psychologists to acquaint students with the kinds of problems with which school psychologists typically work, the methods they employ to deal with problems, social systems in which these endeavors occur, and professional issues that shape and characterize the profession.


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. Prerequisite: CESP 701 or departmental consent.

CESP 821. Multicultural Issues in Counseling (3). This course is 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 selected non-parametric statistics. Develops all statistics through practical application with computer programs. Prerequisite: CESP 704 or instructor's consent.

CESP 824. Techniques of Counseling (3). This course is cross-listed as PSY 972. Examines and practices techniques of 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). This course is 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 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 Disorders (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 department permission.

CESP 837. Family Issues in Counseling (2). This course is 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 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 will be covered in this course. Prerequisites: Admission of the Counseling degree program, CESP 803, CESP 804 or department consent.

CESP 855. Individual Intelligence Assessment (3). This course is cross-listed as PSY 967. 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 hours applied experience. Repeatable for credit. Prerequisites: CESP 824 within the last calendar year, CESP 815 (or concurrent enrollment), 825, 835, 855 (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 858. 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 859. 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. Prerequisite: CESP 822 or departmental consent.

CESP 860. Seminar in Research Problems (1). Develop-ment and presentation of research proposals. Required of students enrolled in thesis programs.

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 867. Practicum in Group Guidance and Counseling Methods (3). Supervised practice in group guidance and counseling. Repeatable for 3 hours of additional credit. The second practicum must be in a different area or have a different focus from that of the first. Prerequisites: CESP 825, 856, and instructor's consent.

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 code 1010) Test is a requirement for state licensure.

Admission Requirements
Educational Leadership
Applicants must have a minimum 3.000 grade point average in their last two years (60 hours) of college coursework from accredited institutions. In addition, applicants must have validated strengths on the multiple indicators listed below.
1. Official transcripts of all college-level work completed and indication of a degree conferral.
2. Three Reference Report Forms from supervisors and/or professional peers of which at least one must be from a supervisor that attests to the applicant's potential as a building administrator.
3. Evidence of certification for a role in the public/private schools and at least one year of accredited experience.
4. A resume or curriculum vita of educational and professional experience.
5. A brief statement of professional goals related to completion of the master's degree and/or certification as a building administrator.
6. A letter signed by a building principal indicating he or she is willing to serve as the student's mentor and will allow the student to fulfill the practicum requirements of the program.

Endorsement Requirements
District Leadership License
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 below.
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. Submission of scores on The School Superintendant Assessment (SSA). The SSA is based on ISLLC standards regarding knowledge, performance, and dispositions necessary for a district-level leader. Scores from the SSA are advisory only and are used to help faculty monitor progress in the program.
4. Master's degree from an accredited institution.
5. Three years of accredited experience in a school district.
6. Statement of Purpose: A 500 word statement that discusses your leadership experience (formal/informal; professional/non-professional). The applicant must be specific as to leadership experience, detailing the goals and outcomes of his/her leadership experience. The statement of purpose will be analyzed for evidence of leadership ability and writing skill.
7. 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.

Doctor of Education
The Department of Educational Leadership offers courses leading to the doctoral degree in educational leadership (EdD).

Admission Requirements
Students applying for admission to the EdD program must have completed graduate work equivalent to the master's degree in education at a regionally accredited institution.
Applicants must have a minimum grade point average of 3.500 on a 4.00 scale for all graduate-level hours and an acceptable score on the three general tests of the GRE taken within the past five years. In addition, applicants must have validated strengths on the multiple indicators listed below:
1. Official transcripts of all college-level work completed and indication of a degree conferral.
2. Completion of coursework leading to a district leadership license and three years of accredited experience in an educational organization. (NOTE: The licensure requirements are undergoing review and may change in the near future. Please contact the department for current information.)
3. At least three letters of recommendation from supervisors and/or professional peers that attest to the applicant's potential for success as an educational leader.
4. A current resume or curriculum vita of educational and professional experience.
5. A brief, one-page statement of professional goals related to the completion of the doctoral degree in educational administration.

Degree Requirements
Completion of requirements includes core courses, a minimum of 15 dissertation hours, final 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
Educational 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 preselected 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 administration 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 administration or instructor's consent.

EL 813. Seminar: Introduction to Educational Leadership and School Finance (3). Discuss educational philosophy, personal goal-setting, and educational administration models. Includes (a) an examination of educational foundations and the major theories of administration and application to specific problems, and (b) an overview of administration of the school district, especially problems involving the community and staff. Examine theoretical concepts related to financial planning and building resources. Review knowledge necessary to plan and organize work groups, projects, and the resources necessary to carry out day-to-day functional activities of school. Prerequisite: admission to the MEd in educational administration or instructor's consent.

EL 815. Practicum: Introduction to Educational Leadership and School Finance (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. Apply financial planning concepts to the school setting and manage the day-to-day financial and other resources allocation to schools. Prerequisite: admission to the MEd in educational administration or instructor's consent.

EL 823. Seminar: Interpersonal Relations and Supervision (3). Examines the 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 enhance support of schools. Studies formative evaluation concepts focusing on performance issues related to actual teaching situations and the teacher's guided analysis of these issues. Examines processes involved in the development of interpersonal skills. Engages in simulated exercises to acquire interpersonal skills desirable for group collaboration and communication. Prerequisite: admission to the MEd in educational administration or instructor's consent.

EL 825. Practicum: Staff and Community Relations (3). Apply 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 enhance support of schools. Studies formative evaluation concepts. Prerequisite: admission to the MEd in educational administration or instructor's consent.

EL 828. Financial Management in Sport (3). This course is 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 will be 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.

EL 830. Practicum: School Closing (1). Engage in closing the school year with a principal/mentor. Prerequisites: admission to the MEd in educational administration or instructor's consent.

EL 831. Diversity and Social Justice (3). This course examines the role of school leadership in an increasingly complex and diverse society. Students will investigate diversity in its various forms including race, ethnicity, language, gender, socioeconomic status, disability, and religious beliefs. Students will 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 time, 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 research can assist in the school. Prerequisite: admission to the MEd in educational administration or instructor's consent.

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 administration or instructor's consent.

EL 835. Practicum: School Law and Personnel Management (3). Apply the concepts related to selection, recruitment, certification, orientation, staff development, evaluation, transfer, dismissal, and retirement. Apply general legal concepts and statutes to various situations and personal/professional liability. Prerequisites: admission to the MEd in educational administration or instructor's consent.

EL 843. Seminar: Curriculum and Learning Theory (3). Examine theoretical concepts related to curriculum philosophies and developmental processes. Examine recent programs and proposals as well as curriculum development at the building and school system levels. Review techniques of program evaluation and major learning theories and principles. Prerequisite: admission to the MEd in educational administration or instructor's consent.

EL 852. Special Studies in Educational Administration and Supervision (1-3). Group study in new materials, new research, or innovations in advanced educational administration and supervision areas for practicing administrators or advanced students. Repeatable for credit with departmental consent. Prerequisite: departmental consent.

EL 855. Practicum: Post Graduate I (2). The first of two post-graduate courses for building-level administrators to continue learning with a mentor and faculty supervisor. Provides the graduate building-level leader a chance to communicate and seek guidance during the early phase of building leadership. The major topics outlined for this course may also be accomplished during the second post-graduate course. Prerequisites: licensure as a building-level administrator.

EL 865. Practicum: Post Graduate II (2). The second of two post-graduate courses for building-level administrators to meet state-level licensure expectations following the completion of a building-level leadership licensure program. Provides the opportunity to continue learning with a mentor and faculty supervisor and a chance to communicate and seek guidance during the early phase of building leadership. The major topics outlined for this course may also be addressed during the first post-graduate course. Prerequisites: completion of a building-level leadership program, successful completion of the School Leader’s Licensure Assessment (Praxis 1010) test, and conditional school leadership licensure.

EL 884. School Plant and Facilities (3). Planning new educational facilities based upon educational programs. Includes the evaluation of existing schools, remodeling, and operation and maintenance of present school plant. Prerequisite: master's degree or instructor’s consent.

EL 890. Special Problems in Administration (1-4). Directed problems in research for master's students primarily under the supervision of a graduate instructor. Prerequisite: instructor’s consent.

EL 947. Post Program District Level Internship (3). A two-semester course designed for individuals who have a conditional leadership certification license and a full-time position
Focuses on the position. District level certification program, conditional leadership the intern's performance level. Prerequisites: completion of district level certification program, conditional leadership license from KSDE, and must be currently in a district level position.


EL 956. District-Level Personnel Administration (3). This course is designed for those students preparing to become district-level school administrators in general and school superintendents in particular. The course focuses on the selection, retention, development, and evaluation of the panoply of personnel that comprise a typical school district. Particular emphasis is placed on hiring practices, staff development, conflict resolution, and contract management. Prerequisite: Admission into the district-level certification program.

EL 963. Politics and Power in Education (3). An examination of the interaction of society and the school as it relates to administrative processes. Studies systems of control, social class, power structure, human relations, and group dynamics. Prerequisite: instructor's consent.

EL 964. Administration & Supervision of Special Education (3). Provides district-level administrators with understanding of federal and state laws that apply to students with exceptionalities and information related to the legal, instructional, and administrative aspects of special education. Covers the mobilization of community resources to support quality education for all children. Addresses practical ethical dimensions of district-level leadership by providing a framework for reflection and deliberation. Explores the various ecological contexts of the family, school, and community. Prerequisite: admission to district-level program.

EL 969. Introduction to Educational Research and Academic writing (3). The course will introduce students to ethical standards of educational research, the various research traditions and methodologies employed in the conduct of educational research. Students will learn to construct a literature review using both library and online search tools, to discriminate among the types of published works available, to critically read research and related literature, and to develop an understanding of academic writing conventions and expectations, and develop facility with APA 5 style. Prerequisite: admission to the EdD program in EL.

EL 970. Advanced Administrative Theory Seminar (5). Examines the relationship between theory and practice in educational administration. Participants consider various theoretical frameworks for empirical studies, program designs, and organizational implementation efforts, and take initial steps toward an integration of those frameworks. Class activities require the application of the constructs and propositions considered in an ongoing analysis of school-related problems and the conceptualization of action programs for addressing such problems. Prerequisite: admission to the EdD program in EL.

EL 971. Decision-Making and Problem-Solving Seminar (5). Focuses on approaches to identifying, clarifying, and solving various problems in elementary and secondary education. Decision-making and problem-solving models are reviewed, critiqued, and applied. Prerequisites: admission to the EdD program; EL 970 and 981, concurrent enrollment in EL 982.

EL 972. Administrative Leadership Seminar (5). Facilitates in-depth investigations of research relevant to leadership theory and practice. Activities include clarifying and developing personal leadership skills; identifying, fostering, and supporting the leadership skills of others; and conducting observations of leaders in action. Prerequisites: admission to the EdD program; EL 970 and 971, and concurrent enrollment in EL 986.

EL 981. Applied Inquiry Seminar I (3). 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. Applied Inquiry Seminar II (3). 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 III (3). 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 986. Field-Based Research I (3). This is the first in a sequence (Fall, Spring, Summer) that provides opportunities for field work leading to the EdD dissertation proposal. Prerequisites: admission to the EdD program; EL 981, 982, and 983, and concurrent enrollment in EL 972.

EL 987. Field-Based Research II (3). Follows EL 986 and continues field-based research activities and development of dissertation proposals. Prerequisites: admission to EdD program, EL 986.

EL 988. Field-Based Research III (1). Follows EL 986 and 987 and culminates the field-based sequence. Prerequisites: admission to EdD program; EL 986 and 987.

EL 989. Advanced Research Methods in Educational Administration (3). Prepares students to examine research design techniques appropriate for use in educational administration and specifically for doctoral dissertations. Includes qualitative and quantitative research methodology, statistical tools and techniques for analysis of data, and examination of software designed to assist researchers in educational administration. Prerequisites: EL 981, 982, 983, and 986.

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. Superintendent/Internship (3-9). Two-semester course designed primarily for individuals who are completing course work 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 project-administrative interest. Students must file an application for this terminal course.

EL 999. Dissertation Research (1-6). Taken concurrently with EL 986, 987, and 988 for 6 credits each semester during the last two years of enrollment. Provides students with dissertation proposal and dissertation advisement and may be taken for 0-6 credits per term for a maximum of 24 credits. Up to 17 credits may be counted toward program completion. Prerequisites: admission to EdD program in EL and required doctoral course work.

Curriculum and Instruction (CI)
Graduate Faculty
Professors: Jeri A. Carroll, Jon M. Engelhardt (Dean), Dennis J. Kear
Associate Professors: Mara Alagic, Peggy Anderson, Frances Clark (graduate coordinator for MEd in Special Ed.), Kay Gibson (Graduate Coordinator for MEd in CI), Linda Mitchell, Twyla Sherman, Johnnie Thompson, Catherine Yeotis
Assistant Professors: Alan Aagaard, Connie Doyle, Judith Hayes, Peggy Jewell, Dalphia Pierce, Anh Tran, 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, functional, and gifted). 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 of the sub-tests, 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 is also available for individuals who are certified to teach young children (birth to age 8). Admission requirements include:

(1) GPA of 3.000 or higher in the last 60 hours; or GPA of at least 2.750 and GRE score on the two sub-tests indicated below that yields an index of at least 5.4 computed by the following formula:

\[
\text{GPA} + \frac{(\text{GRE Verbal} + \text{GRE Quantitative})}{400}
\]

(2) Full admission to WSU Graduate School
(3) Current teaching certificate/license (or eligible for a certificate/license)
(4) Completion of Disposition Assessment with minimum of 12 points and no indicator below 1.

Only a limited number of students are accepted into the program each year.
Applications are evaluated on April 15, July 1, and December 1 for the MEd in special education. Only a limited number of students are accepted into this program.

Master of Education Requirements

The Master of Education (MEd) in curriculum and instruction is a 36-credit hour program. Students must complete either a thesis option or a portfolio option. A site-based delivery model includes 24 hours of instruction at a site off campus, offered one night a week, two semesters each for two years. Students also complete a 12-hour area of specialization, specifically tailored to their needs and interests. In the campus-based delivery model, students complete 17 credit hours of required courses in curriculum and instruction, research and research problems. They also complete 12 hours in a self-selected area of specialization, 3 hours in a course related to their particular thesis or portfolio project, and 4 hours of thesis or portfolio work.

The MEd in special education may be earned under a thesis or research portfolio option. Each option requires completion of 9 hours of prerequisite courses (taken at a graduate or undergraduate level) and 33 credit hours of coursework, practical experience, a written comprehensive examination, and the culminating experience (i.e., thesis or 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.

Courses for Graduate/Undergraduate Credit

CI 501. Professional Writing for Educators (1-3). Helps students learn the writing skills, techniques and typographical errors 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). Will investigate 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 equipment from the desktop. 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). Provides 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. 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.

CI 614l. Early Childhood Unified Pre-student Teaching: Infants/Toddlers (2). Candidates participate in pre-student 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. Prerequisites: CI 603.

CI 615. Learning and Reading Strategies (3). Students are provided with the understanding 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. Assessment & Methods: Preschool (3). Provides knowledge, skills, and dispositions for candidates regarding programs, problems, and philosophies of teaching young children, both with and without exceptionalities, from ages 3 through 5 (preschool levels). Examines assessment, contents, and methods of instruction to meet individual child needs and to deliver instruction in one-to-one, small-group, and large-group planned experiences. Prerequisite: CI 603.

CI 617p. Pre-student Teaching: Preschool (2). Candidates participate in pre-student teaching experience in preschool
settings that include children from ages 3 through 5 (both with and without exceptionalities) and their families. Candidates work with a cooperating teacher and a university supervisor to screen, evaluate, assess, plan curriculum and delivery instruction, adapt for individual child needs, and implement special education services and supports for the education of young children. Prerequisites: CI 613, Corequisite: CI 617.

CI 620. Assessment & Methods: K-3 (3). Provides knowledge, skills, and dispositions for candidates working with families and young children from kindergarten through grade 3. 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 613, and at least one of the following: CI 402J, 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 9-14 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 (3). 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 614L, successful completion of all Core I and II courses and assessments and acceptance into clinic 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 614L, successful completion of all Core I and II courses and assessments and acceptance into clinic practice.

CI 654. Middle Level Strategies: Subject, E-English (3), J-Social Studies (3), M-Mathematics (3), S-Sciences (3). Acquaints educators with teaching techniques and assessment tools specifically tailored to the needs of students in the middle grades 5-8. It is intended for individuals holding elementary or secondary certification or licensure who are teaching or intend to teach in the middle grades. 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. Fullfills 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 outcome. 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). Addresses a broad range of topical issues in curriculum development and implementation. A current issue will be 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 will be covered under this course number, an umbrella number for a variety of topics/innovations in instructional practices. Repeatable.

CI 710. Multicultural Education (3). Emphasizes students understanding multiple perspectives in a global society and developing multiple modality, culturally aware curriculum experiences. Provides 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). This course is an introduction to the role of the library and the library teacher in the school. An overview of issues affecting libraries and library teachers will be 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 will be explored along with roles/responsibilities of special and general educators in relation to students with exceptionalities, especially within inclusive settings. Corequisite: CI 720 or 722. Prerequisite: acceptance into teacher education or completion of a teacher licensure program in general education.

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. Corequisite: CI 719. Prerequisites: CI 311, 320, and acceptance into teacher education or completion of a licensure program in general education.

CI 722. Characteristics: Gifted Learning Needs (2). Introduces the field of gifted education. Explores issues such as theories of intelligence, identification, characteristics and learning needs, special populations, curriculum differentiation, and underachievement. Corequisite: CI 719. Prerequisites: CI 311, 320, and acceptance into teacher education or completion of a licensure program in general education.

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 conductive 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 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 402.

CI 726. Information Technologies in the School Library I (3). Introduces a wide range of information technology applications, including word processing, database, spreadsheet, and presentation software. Emphasis on using these applications in a library setting. 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 (3). This course is an introduction to a wide range of technologies and equipment in the school library. The course will cover selection and purchase as well as basic maintenance and repair of equipment. The course will include the basis of local area network design. Students will also learn the basics of media production and strategies for teaching media production to students. Students will also look at the future of technology in school libraries. Prerequisite: CI 726.

CI 728. Cataloging (2). This course is an introduction to cataloging materials for the school library. The course will include 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). This course will provide students with skills in evaluating and selecting library materials. The course will present 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). This course is comprehensively designed to give students knowledge about the role of the school library in the curriculum development process. It will also address 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 (3). Provides information and examples on ways to effectively manage a library. Covers budgeting, grants, policies, procedures, and collection selection/deselection. 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 735. Introduction to the Gifted (3). Students are introduced to the historical and socio-educational perspectives germane to gifted education. Explores issues related to the field of gifted education such as theories of intelligence, identification, delivery modes, characteristics and learning needs, special populations, curriculum differentiation, and underachievement. Prerequisite: 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 consent.

CI 739. Early Childhood Unified Assessment & Methods (3). Provides knowledge, skills, and dispositions for candidates working with families and children from kindergarten through grade 3. Covers theory, methodology, screening, evaluation, assessment, and instructional practices, including adaptations/modifications of general education curriculum/instruction for young children both with and without delays/diagnosed disabilities. Prerequisites: admission into teacher education, all core I courses, or a BA degree with current Kansas teaching certificate/license at the elementary level.

CI 740. Introduction to Early Childhood Special Education (3). Students are provided a basic introduction to the emerging field of early intervention for children with disabilities and their families. Prerequisites: CESP 728 and CI 761.

CI 741. Early Childhood Special Education Methods: Preschool (3). Provides specific techniques needed to teach children with exceptionalities in preschool settings. Includes competencies within early childhood special education for (a) legal foundations (IDEA, Part B); (b) characteristics of learners; (c) assessment, diagnosis, and evaluation; (d) report and Individualized Education Plan (IEP) development; (e) instructional content and management strategies; (f) instructional content and practice; (g) planning and managing the teaching and learning environment; (h) managing student behavior and social interaction skills; (i) collaborating and forming partnerships with family members and other professionals; (j) professional and ethical practices; and (k) strategies for working with students with exceptional learning needs in general and special education preschool settings. Prerequisites: CI 530 or 702, CI 740, admission to the Teacher Education Program or to the special education graduate program as a non-degree student, 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. Alternative Certification Internship I (3). In the alternative teacher certification program, this internship replaces the required student teaching assignment for the purposes of certification. Students teach half-time or more with a provisional certificate. Credit is given for a combination of (a) the teaching experience; (b) attendance; and (c) the completion of assignments in the scheduled seminars. Prerequisites: employment by a school district and completion of course work for restricted teacher licensure.

CI 744. Alternative Certification Internship II (3). Continuation of CI 743. Prerequisites: employment by a school district and completion of course work for restricted teacher licensure.

CI 745. 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 430 or 711, CI 755U, CSD 676.

CI 748. Alternative Certification Internship III (3). Prerequisites: employment by a school district and completion of course work for restricted teacher licensure.

CI 749. Alternative Certification Internship IV (3). Prerequisites: employment by a school district and completion of course work for provisional teacher certification.
CI 749E. ECU Practicum (1). Provides supervised practical experience in program settings that serve young children with/without disabilities and their families. Candidates work with a cooperating teacher(s) to observe various program levels that serve infants, toddlers, and preschoolers and their families regarding learning environments, assessment and learning strategies aligned with state and/or district standards for the Early Childhood Unified teaching license. Prerequisites: CI 603, 611, and approved application for practicum placement.

CI 749F. Practicum: Functional (3). Offers 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). Offers supervised practical experience 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 advisor's consent. Prerequisite: teacher certification or departmental consent.

CI 760. Parent Education (3). An introduction to ways of working with parents of preschool and elementary children and an analysis of formal and informal approaches emphasizing the teacher's role in developing these procedures.

CI 761. Early Childhood Education (3). Students examine programs, problems, and philosophy of educating children in the preschool years. Prerequisite: admission to the Teacher Education Program.

CI 762. Instructional Strategies: Preschool Education (3). Students examine the content and methods of instruction in preschools and observe/teach in a variety of settings. Students study teaching methods for preschool children and prepare materials to enhance the learning experiences of these children. Prerequisite: CI 761.

CI 771. Technology in the Classroom (2). Introduces classroom teachers to new technologies and their uses 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: CI 770M or CI 770P or 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 technology 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 will 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. This course is designed to meet the standards required for ESL/BE endorsement or certification in TESOL.

CI 775. Applied Linguistics: ESL/Bilingual Teacher (3). Examines a broad picture of human language: what it is, what it is used for, and how it works. Enables students to recognize uninformulated 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 the most of the subfields of linguistics (e.g., phonetics, morphology, semantics, syntax, etc.).

CI 776. Second Language Acquisition (3). This course will survey nativist, environmentalist, and interactionist theories of second-language acquisition. This course will cover 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. This course will include 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 backwash.

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: entrance into teacher education, valid teaching certification, or instructor consent.

CI 780L. Technology in the Classroom: Language Arts (2). Enables classroom teachers to utilize computers and related technology in the language arts curriculum. Appropriate software is evaluated and used in planning 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 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 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 5 hours of pass/fail, SU, and Cr/NCr credit toward the degree program.

CI 782. Internet in the Classroom (3). This project-based course requires students to identify Internet resources that best meet classroom curricular goals and plan instruction using those resources. This course 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). Explore and expand your knowledge of Internet. Complete a special project designed to utilize 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 will be 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 801. Graduate Seminar in Special Education I (1). Surveys information regarding graduate study in special education, including legal policies and procedures, ethical issues, advocacy, program requirements, technology, and standards-based education. Prerequisites: full admission to the MEd in special education—adaptive, functional, and gifted programs.

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 809. Foundations and Characteristics of Mild Exceptionalities (3). Introduces students to the principles, concepts, and historical foundations underlying the provision of services for students with mild exceptionalities. Examines characteristics of students identified as having behavior disorders, learning disabilities, or mental retardation. Discusses legal and ethical principles related to various delivery approaches, and examines roles of the students with exceptional learning needs, their parents, and educators as well as related services and community personnel. Discusses current developments in the field of special education. Prerequisites: CI 320 or 702, CI 420 or 711, CI 722 and 724, and full admission to the MEd program in special education; or instructor's consent.

CI 810. Advanced Methods: Social/Emotional Development (2). Provides knowledge and skills in the areas of social and affective education for children and youth with exceptionalities. Corequisite: CI 810A. Prerequisite: CI 801.

CI 810A. Internship/Practicum: Social/Emotional Development (1). Provides a supervised opportunity for students to implement and evaluate learning experiences and curricula that develop social skills and facilitate emotional development of learners with exceptional needs. Corequisite: CI 810. Prerequisite: CI 801.

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. Corequisite: CI 811A. Prerequisite: CI 801.

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. Corequisite: CI 811. Prerequisites: CI 719, 720, 742, 749F, 801, full admission to the special education—functional program.

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. Prerequisite: CI 801.

CI 814. Advanced Methods: Gifted (2). Utilizes strategies and techniques for planning qualitatively-differentiated curriculum to meet the unique academic needs of the gifted learner. Corequisite: CI 814A. Prerequisite: CI 801.

CI 814A. Internship/Practicum: Advanced Methods Gifted (1). Provides a supervised opportunity for students to implement and evaluate differentiated curriculum for gifted learners. Corequisite: CI 814. Prerequisite: CI 749C.

CI 815. Advanced Methods: Cognitive Strategies (2). Utilizes understanding of cognitive development to construct learning experiences that contribute to the cognitive potential of learners with adaptive needs and their accessibility to the general education curriculum. Corequisite: CI 815A. Prerequisite: CI 801.

CI 815A. Internship/Practicum: Cognitive Strategies (2). 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. Prerequisite: CI 801.

CI 816. Advanced Methods: Developing Critical and Creative Thought (2). Utilizes understanding of cognitive and creative development to construct learning experiences that challenge the cognitive and creative potential of gifted learners. Corequisite: CI 816A. Prerequisite: CI 801.

CI 816A. Internship: Developing Critical and Creative Thought (1). Provides a supervised opportunity for students to implement and evaluate curriculum that challenges the cognitive and creative potential of gifted learners. Corequisite: CI 816. Prerequisite: CI 801.

CI 817. From Language to Literacy: Meeting Needs of Students with Disabilities (2). Provides content relevant to language development and disorders that impact 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 language and literacy needs of students. Specifically, candidates will 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 will be stressed. Corequisite: CI 817A.

CI 817A. Internship/Practicum: Language to Literacy (1). Provides a 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 will implement educational interventions that are effective in meeting language and literacy needs of students as well as implementation of appropriate strategies for teaching oral language, reading, and written expression. Corequisite: CI 817.

CI 818. Behavior Management—Positive Behavioral Supports (2). Develops behavior-management strategies specifically needed by classroom teachers to affect academic and social outcomes. Addresses technical, theoretical, and practical aspects of applied behavior analysis and positive behavioral supports. Corequisite: CI 818A.

CI 818A. Internship/Practicum: 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. Corequisite: CI 818. Prerequisite: CI 801.

CI 819. Nonsymbolic and Symbolic Communication (2). Utilizes strategies and techniques for assessing, designing, and delivering instruction in order to meet the unique communication needs of learners with severe and multiple disabilities. Corequisite: CI 819A. Prerequisites: CI 719, 720, 742, 749F, 801, and full admission into the Special Education—Functional program.

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. Corequisite:
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 to 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.

CI 842. Early Childhood Special Education Methods: Infants/Toddlers and Families (3). Provides specific techniques needed to provide services, supports, and accommodations for infants/toddlers and their families who face challenges of developmental disabilities. Includes competencies within early childhood special education for (a) legal foundations (IDEA Part C); (b) collaborating and forming partnerships with family members and other professionals; (c) typical and atypical developmental patterns; (d) child assessment, diagnosis, and evaluation; (e) family assessment and evaluation; (f) family service coordination; (g) development of Individualized Family Service Plans (IFSP); (h) family-centered intervention strategies; (i) instructional content and practice; (j) planning intervention strategies in natural environments; (k) transitions for infants/toddlers and families; and (l) professional and ethical practices. Prerequisites: CI 320 or 712, CI 740, full admission to the MEd in special education program, or instructor’s consent.

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), children/adolescents with learning disabilities (847E), educable mental retardation (847I), or behavior disorders (847K) supervised by a university personnel, emphasizing applied teaching methods for students with mild exceptionalities, including formal-informal psycho-educational 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 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 752.

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 847M. Practicum: Gifted (3-6). Stresses applied teaching approaches. Provides opportunities to apply various theoretical, structural, and technological methodologies related to the education of the gifted learner. Prerequisites: CI 735 and 883.

CI 847R. Practicum: Regular Early Childhood (3). Provides opportunities in a traditional setting for the student to develop competencies with young children by working in a classroom setting with a trained professional. Prerequisites: CI 761 and 762.

CI 851. Special Education Action Research I (2). Students learn the processes of action research, classroom inquiry, and reflection to engage in the improvement of professional practice. Students write action research proposals related to various curriculum and instruction issues and problems that they identify in their individual special education settings. Prerequisites: CESP 701, CI 801, and at least 13 of the 21 hours in the Core Course sequence.

CI 852. Special Education Action Research II (2). Students choose a curriculum or instruction problem to investigate using action research and prepare a paper to disseminate findings to professional colleagues. Students formulate either an acceptable agenda for the development of a professional portfolio or an acceptable proposal for a master’s thesis. Prerequisite: CI 851.

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 to 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 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 applications requirement for the MEd in curriculum and instruction.

CI 861. Seminar in Special Education Research (3). Development and presentation of research proposal. Prerequisites: admission to MEd in special education, CESP 701.

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 portfolio committee, and orally defend the professional portfolio. Prerequisites: CI 862.

CI 870. Trends in Early Childhood Education (3). Students analyze current early childhood education research with an in-depth study of contemporary programs influencing the education of young children.

CI 873. Portfolio Development in Special Education (2). Students develop their research portfolio in consultation with their portfolio advisor and two other portfolio committee members. Prerequisite: CI 852, CI 858.

CI 874. Portfolio Presentation in Special Education (2). Students complete, present, and orally defend to their portfolio committee their 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 advisor and committee. Students receive credit for this course when their thesis has been completed and defended. Prerequisite: CI 804, or 852, or 860.

CI 876. Master's Thesis (1-2). Students complete and orally defend their thesis. Students work closely with their advisor and committee. Students needing an additional semester to satisfy these requirements should enroll in one hour of CI 876. Students receive credit for courses when their thesis has been completed and defended. Prerequisite: CI 875 or instructor’s consent.

CI 883. Methods in Teaching the Gifted (3). Students examine strategies and techniques for planning qualitatively differentiated curriculum to meet the unique academic needs of the gifted learner. Students explore a variety of curriculum approaches including acceleration, enrichment, compacting, grouping, and combinations of these. Prerequisite: CI 735.

CI 889. Action Research in Special Education (3). Students learn the process of classroom inquiry and reflection through the use of action research. Students identify a curriculum or instruction question related to special education settings. Through research, students seek to answer the question and prepare a paper to disseminate findings to professional colleagues. Prerequisites: Completion of the Core I provisional sequence in one of the MEd in special education specializations. For mild specializations: CI 723, 724, 809, 847E, 815, or CI 818, and 887. For early childhood special ed: CI 740, 741, 842, 847A Practicum, and 887. For gifted education: CI 735, 847M Practicum, and 883.

CI 894. Applied 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 this rapidly developing field. Prerequisites: CI 740, 741, 842, 847E, 887, and 892 or instructor’s consent. Repeatable for credit.

Kinesiology and Sport Studies (KSS)

Graduate Faculty

Professors: Lori K. Miller (associate dean, Education), Susan K. Kovar (dean, Graduate School)
Associate Professors: Pamela J. Hoyes Beehler (chairperson), Michael Rogers, Clay Stoldt
Assistant Professors: Mark Vermillion, Jeremy Patterson

Degrees and Areas of Specialization

The Department of Kinesiology and Sport Studies offers courses of study leading to the Master of Education (MEd) in sport administration or in physical education with an emphasis in exercise science. Academic training is provided for students who wish to prepare for careers in physical education, exercise science/wellness, and sport administration.

Admission Requirements

Admission to the master’s degree program in physical education requires students to have completed an undergraduate degree from a regionally accredited institution with a grade point average of at least 2.75 (4.000 system) for the last 60 hours of course work, cumulative score for the verbal and quantitative sections of the Graduate Record Exam, and faculty evaluation based on letter of application, resume, and letters of recommendation. The program limits admissions to 30 students per year with a minimum score of 60 (out of 100 possible) based on the above admission criteria options.

Master of Education Requirements

The Master of Education (MEd) in physical education with an emphasis 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.

The MEd program in sport administration requires 30 hours of course work, a 6-hour internship, a completed culminating project, and a final written 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 to assist older adults in retaining 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 advisor 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 explaining the student’s purpose and interest in obtaining the Certificate in Functional Aging, as well as their career plans.

The program consists of 13 hours of coursework:

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>KSS 780, Physical Dimensions of Aging</td>
<td>3</td>
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<tr>
<td>PSY or GERON 798, Multidisciplinary Perspectives in Aging</td>
<td>3</td>
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<tr>
<td>PSY 911, Seminar in Aging</td>
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</table>

Candidate evaluations are based on one of two options: (a) GPA for the last 60 hours of course work, cumulative score for the verbal and quantitative sections of the Graduate Record Exam, and faculty evaluation based on letter of application, resume, and letters of recommendation. The program limits admissions to 30 students per year with a minimum score of 60 (out of 100 possible) based on the above admission criteria options.

Master of Education Requirements

The Master of Education (MEd) in physical education with an emphasis 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.

The MEd program in sport administration requires 30 hours of course work, a 6-hour internship, a completed culminating project, and a final written 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 to assist older adults in retaining 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.

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</table>
Graduate Certificate in Coaching. The coaching certificate, a 16-hour program, educates current or potential coaches regarding physiology, risk management and sport safety, sport psychology, and organization and administration.

The program consists of 16 hours of coursework:

Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>KSS 544</td>
<td>Organization and Administration of Physical Education Programs</td>
<td>3</td>
</tr>
<tr>
<td>KSS 750</td>
<td>Sport Safety Training</td>
<td>1</td>
</tr>
<tr>
<td>KSS 770</td>
<td>Psychology of Sport</td>
<td>3</td>
</tr>
<tr>
<td>KSS 795</td>
<td>Physiology of Athletic Performance</td>
<td>3</td>
</tr>
<tr>
<td>KSS 796</td>
<td>Motor Integration</td>
<td>3</td>
</tr>
<tr>
<td>KSS 835</td>
<td>Legal Issues in the Profession</td>
<td>3</td>
</tr>
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</table>

Culminating experience designed to complement and enhance the 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 Credit/No Credit only.

KSS 750. 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.

KSS 745. Organization and Administration of Sport (3). Discusses the fundamental aspects of a management within any sport-related entity. Addresses management, marketing, facility management, human resources, legal issues, budgeting/finance, purchasing, and communication.

KSS 547A. Internship in Sport Administration (12). Culminating activity for students in sport administration. Students spend the equivalent of full-time employment in an appropriate agency for a total of at least 640 hours. Prerequisites: 90 hours of accumulated course credit, 2.500 GPA overall, and advisor's permission.

KSS 547B. Internship in Sport Administration (12). Second internship experience for students in sport administration; takes place in a different setting than KSS 547A. Students spend the equivalent of full-time employment in the appropriate agency for a total of at least 640 hours. Prerequisites: KSS 547A, 2.500 GPA overall and for major, senior standing in College of Education, advisor's approval.

KSS 557. Internship in Exercise Science (8). Culminating activity for students completing the BA in exercise science. Students spend the equivalent of full-time employment in an appropriate agency for one full semester. Prerequisites: senior standing, departmental consent, KSS 470, 2.500 minimum GPA overall and for major, admission to College of Education.

KSS 555. Physiological Aspects of Sport and Physical Activity (3). Focuses on the concepts of tort law, constitutional law, and statutory law as they relate to the sport professions. Emphasizes liability-related issues as they impact sport administrators, exercise professionals, and teachers/coaches of physical activity. Prerequisites: KSS 112.

KSS 556. Marketing and Physical Activity Programs (3). Introduces concepts and tools used to market sport and physical activity. Emphasizes marketing strategies that are applicable to the sport administrator, teacher/coach, and exercise professional. Prerequisite: KSS 112.

KSS 560. Legal Aspects of Sport and Physical Activity (3). Focuses on the concepts of tort law, constitutional law, and statutory law as they relate to the sport professions. Emphasizes liability-related issues as they impact sport administrators, exercise professionals, and teachers/coaches of physical activity. Prerequisites: KSS 112.

KSS 590. Independent Study (1-3). Prerequisite: departmental consent.

KSS 711. Structuring and Scheduling Sports Tournaments (3). Involves the structural design, scheduling processes, and mathematics of sports tournaments, elimination, placement, and round robin formats.

KSS 720. Teaching Strategies (3). Non-traditional and innovative techniques and strategies for increasing student participation and motivation in the physical education lesson. Prerequisites: senior standing, graduate standing, or instructor's consent.

KSS 732. Pathophysiology of Cardiac Disease (3). This course will introduce the pathophysiology of multiple cardiovascular conditions and the developing industry of cardiac rehabilitation. In addition, this course will introduce assessment techniques in electrocardiography (ECG) to assist in the diagnosis of cardiovascular disease. It will include 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. Prerequisites: KSS 530.

KSS 750. Workshop in Education (1-3).

KSS 752. Special Studies in Kinesiology and Sport Studies (1-3). Group study in a preselected area of health, physical education, or recreation. Repeatable for credit with departmental consent.

KSS 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: KSS 111, 210E, 229, 328, and 530.


KSS 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.

KSS 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 Credit/No Credit only.

KSS 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: KSS 530 or 830.

KSS 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.

KSS 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 KSS 460 or instructor consent.
KSS 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 KSS 530.

Courses for Graduate Students Only

KSS 800. Recent Literature in the Profession (3). Survey and critical analysis of research and other pertinent materials in the field.

KSS 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.

KSS 802. Leadership and Ethics in Sport (3). This course is designed to give students an understanding of the numerous aspects of leadership as well as the various issues and concepts relating to ethical decision making in sport administration settings.

KSS 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.

KSS 811. Sport in Society (3). This course addresses the impact of sports on American culture, with focus on competition, economics, mythology, education, religion, ethics, professional sports, sports and minorities.

KSS 814. Analysis of Teaching (3). An in-depth examination of teacher effectiveness. Includes analyzing of research in physical education, identifying significant teacher and student behaviors involved in effective teaching, examining evaluation models designed for analyzing and measuring teaching effectiveness, and developing intervention programs.

KSS 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: KSS 530 or equivalent and graduate standing.

KSS 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. This class addresses a variety of communication-related topics, including public relations management, image, media relations, and community relations.

KSS 826. Trends and Issues in Physical Education (3). For the physical education specialist. Directed reading and special investigation of selected current trends, controversial issues, and challenges/problems related to physical education. Identification, analysis, and discussion of on-the-job problems will occur.

KSS 829. Assessment in Physical Education (3). Prepares teachers to use assessment in physical education for the following outcomes: to improve student learning, to keep assessment as an ongoing process, to make assessment a learning experience, to provide feedback to students, to engage students in applying what they learn, and to motivate students to achieve.

KSS 830. Advanced Physiology and Anatomy of Exercise (3). In-depth study into 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: KSS 530.

KSS 835. Legal Issues in the Profession (3). Acquaints the graduate student with legal research and the role that law plays in governing the sport and fitness industries. Actively research various theories of law and how they affect the nature of sport, fitness activity, the participants, and consumers. Investigates the basic concept of negligence utilizing illustrative cases from sports, physical education, and fitness activities. Also focuses on specific situations regarding injury and subsequent lawsuits.

KSS 847. Internship (1-12). Internship in selected areas of specialization in sport administration. Prerequisite: departmental consent.

KSS 857. 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.

KSS 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. Prerequisite: KSS 800.

KSS 862. Professional Portfolio Development (1-2). Students develop the professional portfolio proposed and accepted in CI 860. In consultation with their portfolio advisor and two other faculty members, students proceed with their approved agendas. Prerequisite: CI 860.

KSS 863. Presentation of Professional Portfolio (1-2). Students complete, present to their faculty portfolio committee, and orally defend the professional portfolio proposed in CI 860. Prerequisites: CI 860 and KSS 862 or CI 862 (or concurrent enrollment in 862).

KSS 875. 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, KSS 860, and departmental consent.

KSS 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: KSS 875 and consent of the student’s committee chair.

KSS 880. Special Topics (1-4). Directed reading and research under supervision of a graduate instructor. Prerequisite: departmental consent.

KSS 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.

Music Education
See School of Music section, College of Fine Arts.
Notes
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 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.

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 deficiency 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. The GRE scores will help in the admission decisions for those students with marginal grades.

Degree Requirements
The MS degree requires the completion of a Plan of Study approved by the student's advisor and the department graduate coordinator, which must be filed within the first 12 credit hours of graduate coursework. Three options are available:

1. the thesis option requires a minimum of 24 hours of coursework plus a minimum of 6 hours of thesis,
2. the directed project option requires a minimum of 30 hours of coursework plus a minimum of 3 hours of directed project, and
3. the coursework option requires a minimum of 33 hours of 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. 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 course 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.

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 advisor. 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 designations 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/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 advisor 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 will submit a written dissertation proposal to the advisory committee. After reading the proposal and receiving permission of the graduate dean, the adviso-
ry committee will conduct 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.

**Aerospace Engineering (AE)**

**Graduate Faculty**

**Professors:** Klaus A. Hoffmann (doctoral graduate coordinator), Walter J. Horn, L. Scott Miller (chair), Michael Papadakis, Kamran Rokhsaz (master’s graduate coordinator), Bert L. Smith, Roy Y. Myose, James E. Steck, John S. Tomblin

**Associate Professors:** James E. Locke, M. Gawad Nagati, Charles Yang

**Assistant Professors:** 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, aeroservoelasticity, aeroelasticity, aerodynamics, aircraft design, aircraft 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 Raytheon.

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 under the College of Engineering heading.

**Doctor of Philosophy**

Courses of study leading to the Doctor of Philosophy (PhD) degree are available with specializations in the same fields as listed above for the MS degree. Details of the PhD program requirements can be found under the College of Engineering heading.

**Graduate Courses**

All graduate courses must be approved in advance of enrollment by a student’s graduate advisor.

**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 with a C or better. 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, AE 514, and AE 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. Prerequisites: AE 333, 525.

**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 653. Basic Composite Material Technologies (3).** Introduces basic composite materials, including mechanical behavior, material classification, testing for mechanical properties, manufacturing methods, nondestructive inspection, and design. Prerequisite: AE 333.

**AE 654. Manufacturing Composite Structures (1-2).** Manufacturing methods and tooling for fiber-reinforced polymer structures and structural components. Prerequisites: both ME 250 and AE 653 are recommended.

**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. Aeropropulsion II (3).** In-depth study of rocket and jet propulsion. Turbojet and rocket engine components.
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 AE 714, and AE 607 or ECE 684 or ME 659.

AE 711. Intermediate Aerodynamics (3). A study of 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). IR; 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 713. 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, buffetting, dynamic response to rapidly applied periodic forces, aeroelastic effects on load distribution, and static and dynamic stability. Prerequisites: AE 333, 424, 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. Prerequisites: AE 373, 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. Prerequisites: 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 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 ECE 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 330 and 373.

Courses for Graduate Students Only


AE 807. Modern Flight Control Systems Design II (3). Continuation of AE 707, emphasizing the effects of atmospheric turbulence and corrupted measurements; state estimation using the Kalman filter; output feedback design methods for flight control; 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. Utilization of some two- and three-dimensional computer codes. Prerequisites: AE 711 and MATH 757 or equivalent.

AE 812. Aerodynamics of Viscous Fluids (3). Viscous fluids flow theory and boundary layers. Prerequisite: AE 424 or ME 521.


AE 817. Transonic Aerodynamics (3). Experimental and analytical difficulties in flow and flight near Mach one; basic equations and solution methods; linearized 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; SClram jets. Prerequisites: AE 711 and 716 or equivalent.

AE 822. Finite Element Analysis of Structures II (3). Formulation of the finite element equations by variational methods; the 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: consent of the instructor.

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 876. MS Thesis (1-6). Graded S/U only.

AE 878. MS Directed Project (1-3). A project conducted under the supervision of an academic advisor for the directed project option. Requires a written report and an oral presentation on the project. Graded S/U only. Prerequisite: consent of academic advisor.

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 Aerostatics (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 lifting surfaces. Prerequisites: AE 711 and 777 or instructor's consent.

AE 919. Advanced Computational Fluid Dynamics (3). A study of structured grid generation schemes, transformation of the governing equations of fluid motion, numerical algorithms for the solution of Euler equations, parabolized Navier-Stokes equations, and Navier-Stokes equations. Explore the fundamentals of unstructured grids and finite volume schemes. Prerequisite: AE 719 or ME 858.

AE 936. Theory of Plasticity (3). Includes criteria of yielding, plastic stress-strain relationships, and stress and deformation in thick-walled shells, rotating disks 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 and Computer Engineering (ECE)

Graduate Faculty

Professors: Ward T. Jewell, Hyuck M. Kwon, Glyn Rimmington, M. Ed Sawan (chairperson and graduate coordinator)

Associate Professors: Larry D. Paarmann, Ravindra Pendse, Steven R. Skinner, Asrat Teshome, John M. Watkins

Assistant Professors: Coskun Cetinkaya, Sudharman Jayaveera, Fred J. Meyer, Kameswara R. Namuduri

The Department of Electrical and Computer Engineering offers courses of study leading to the Master of Science (MS) and Doctor of Philosophy (PhD) degrees.

Master of Science

Courses of study leading to the MS degree are available with specializations in any of the following five fields: (1) control systems, (2) communications, (3) signal processing, (4) computers and digital systems, and (5) energy and power systems. Details of the MS program can be found under the College of Engineering heading.

Doctor of Philosophy

Courses of study leading to the Doctor of Philosophy (PhD) degree are available with specializations in control theory, communications/signal processing, digital systems, and energy and power systems. Details of the PhD program can be found under the College of Engineering heading.

Facilities

Modern electrical engineering laboratories contain facilities for experimental work in areas of instrumentation, control systems, computers and digital systems, electronics, circuits, energy conversion, power electronics, and power quality.

Courses for Graduate/Undergraduate Credit


ECE 544. Digital Design and Simulation with Verilog (3). Behavioral and structural modeling of digital systems using the Verilog Hardware Description Language. Students use a commercial computer-aided design tool. Modeling and simulation from register-transfer level through switch level. Top-down modular design and test; introduction to verification and validation. Prerequisite: ECE 294. Corequisite: CS 300.

ECE 577. Special Topics in Electrical and Computer Engineering (1-4). New or special courses presented on sufficient demand. Repeatable for credit. Prerequisite: departmental consent.

ECE 585. Electrical Design Project I (2). 3L. A design project under faculty supervision chosen according to the student's interest. Prerequisites: COMM 11 and departmental consent. May not be counted toward a graduate electrical major.

ECE 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 FSK and PSK digital communication systems considered as time permits. Prerequisites: ECE 383 and either STAT 471 or MSE 254.

ECE 588. Advanced Electric Motors (3). Advanced electric motor applications and theory. Includes single-phase motors, adjustable speed ac drive applications, and stepper motors. Prerequisites: ECE 488 and 492.

ECE 594. Microprocessor Based System Design (4). 3R, 1L. 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: ECE 394, or 238 and 294.

ECE 595. Electrical Design Project II (2). 3L. A continuation of ECE 585. Prerequisite: ECE 585. Will not count toward a graduate electrical engineering degree.

ECE 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: ECE 282.

ECE 616. Introduction to Wireless Communications (3). Introduces students to the basic principles and issues related to wireless communications. We will consider not only the basic technical aspects of the wireless communications, but also the market issues, social and cultural impact of the wireless communications, deregulation issues as well as political issues relating to the development and wide popularity of wireless communications. The level of the course will be applicable to junior or senior undergraduates as well as beginning graduate students. Prerequisites: ECE 383, IE 254.
ECE 666. Computer Forensics (3). Computer crimes include security violations and unauthorized access and theft of sensitive information. In this course, we discuss procedures for the identification, preservation, and extraction of electronic evidence that can be legally used when a computer crime is committed. From the network perspective, we discuss auditing and investigation of network and host intrusions. Forensic tools and resources for system administrators and information system security officers will also be covered. Legal issues related to computer and network forensics will be discussed. There will be about eight programming-related laboratory exercises in this class. This course is intended for senior undergraduate and graduate students majoring in ECE and computer science. Prerequisites: ECE 138 and CS 540. In addition, good programming skills in one of the languages (C, C++, or Java), familiarity with the operating systems (UNIX/Windows) are required.

ECE 684. Introductory Control System Concepts (3). An introduction to system modeling and simulation, dynamic response, feedback theory, stability criteria, and compensation design. Prerequisite: ECE 383.

ECE 688. Power Electronics (4). 3R; 3L. 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 DC-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: ECE 492.

ECE 691. Integrated Electronics (3). A study of BJTs and MOS analog and digital integrated circuits. Includes BJTs, BIMOS, and MOS fabrication; application specific semi-custom VLSI arrays; device performance and characteristics; and integrated circuit design and applications. Prerequisites: ECE 194 and 493 or departmental consent.

ECE 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: ECE 598.

ECE 726. Digital Communication Systems I (3). Presents the theoretical and practical aspects of digital 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, DPSK, 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 M-ary digital systems in signal-space. Prerequisites: ECE 586 and 754.

ECE 736. Data Communication Networks (3). Presents a quantitative performance evaluation of telecommunication networks and systems. Includes fundamental digital communication systems review; packet communications; queuing theory; OSI, x.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 broad band networks. Prerequisite: ECE 383 or departmental consent.

ECE 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: ECE 736.

ECE 738. Embedded Systems Programming (3). A study of 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: ECE 594 or equivalent.

ECE 744. Introduction to VHDL (3). An introduction to VHDL hardware description language. Includes different types of modeling techniques using state-of-the-art CAD tools. Covers extensively behavioral modeling, structural modeling, and data-flow modeling. Design assignments include design and simulation of both combinational and sequential circuits using VHDL. Prerequisites: ECE 138 and 394.

ECE 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 applications to system analysis and identification, analog and digital signal processing, data compression parameter estimation, and related disciplines. Prerequisites: ECE 383 and either STAT 471 or IME 254.

ECE 764. Routing and Switching I (4). 3R; 3L. An introductory course which studies different hardware technologies, like ethernet and token ring. Discusses VLSM. Introduces different routing protocols. Includes hands-on experience in the ECE department's routing and switching lab. Prerequisite: ECE 736 or departmental consent.

ECE 765. Routing and Switching II (4). 3R; 3L. Discusses different bridging techniques, including SRB, RSRB, and DLSW. Also includes advanced routing protocols, such as OSPF and EIGRP, and route redistribution. Includes hands-on experience in the ECE department's routing and switching lab. Prerequisite: ECE 764 or departmental consent.

ECE 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: ECE 736 or 764, or departmental consent.

ECE 777. Selected Topics in Electrical Engineering (1-4). New or special courses presented on sufficient demand. Repeatable for credit. Prerequisite: departmental consent.

ECE 781. Analog Filters (3). A detailed study of analog filter design methods. Includes both passive and active filters. Discusses analog filter approximations; covers sensitivity and noise analyses. Prerequisite: ECE 383 and 492.

ECE 782. Digital Signal Processing (3). Presents the fundamental concepts and techniques of digital signal processing. Time domain operations and techniques include difference equations and convolution summation. Covers Z-transform methods, frequency-domain analysis of discrete-time signals and systems, discrete Fourier transform, and fast Fourier transform. Emphasizes the frequency response of discrete-time systems and the relationship to analog systems. Prerequisite: ECE 383 or departmental consent.

ECE 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.

ECE 791. Design of Analog Integrated Circuits (3). This course is concerned primarily with the design of analog integrated circuits, and detailed analysis. The design concentrates on MOS devices, but some attention will also be given to bipolar technology. Dynamic loads will 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 receiving the emphasis. SPICE simulation will be extensively used, including parameter sweeps, temperature effects, and sensitivity analysis as well as frequency response and time-domain analysis. Prerequisite: ECE 691.


ECE 797. 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: ECE 598.
Courses for Graduate Students Only

ECE 810. Optical Networks (3). A comprehensive study of fiber optic communication systems, components, and networks. Subjects include modulation, wavelength division multiplexing, dispersion, single mode and multimode fibers, fiber optic components, optical cross-connects, and SONET rings. Prerequisite: ECE 510.

ECE 816. Advanced Signal Processing for Wireless Communications (3). Introduces the role of statistical signal processing in wireless communications and studies various signal processing techniques. Begins with an overview of the fundamentals of wireless communications and physical properties of the wireless channel. Covers topics such as adaptive filtering, interference suppression, space-time processing and MIMO techniques. Corequisites: ECE 726 and 754.

ECE 817. Theory of Detection and Estimation (3). Introduces students to the fundamental ideas of detection and estimation theory. Some of the topics covered will include binary hypothesis testing, potimal signal detection, performance analysis of optimum detectors, elements of parameter estimation and signal estimation. These ideas are basic to statistical signal processing and communications transceiver design. Prerequisite: ECE 754.

ECE 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 code (STB); multi-input multi-output (MIMO); orthogonal frequency division multiplexing (OFDM) systems; and multi carrier code division multiple access (MC-CDMA) communications. Prerequisite: ECE 726.

ECE 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: ECE 754.

ECE 844. Advanced Computer Architecture I (3). Covers advanced architectural subjects—microprogramming, economics of chip design, instruction set performance, and pipelining. Prerequisite: ECE 594 or equivalent.

ECE 845. Adaptive Filters (3).Concerned with estimating a signal of interest or the state of a system in the presence of additive noise, but without making use of prior statistical characteristics of the signal nor the noise. Concerned with the design, analysis, and application of recursive filtering algorithms that operate in an environment of unknown statistics. Content includes least mean-square (LMS) filters, recursive least-square (RLS) filters, and recursive least-squares lattice (LSE) filters. All are adaptive and self-designing. Includes concepts of convergence, tracking ability, and robustness. Prerequisite: ECE 754.

ECE 884. Multi-Service Over IP (4). 3R; 1L. 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. Prerequisites: ECE 764 and graduate standing in ECE.

ECE 876. MS Thesis (1-6). Graded S/U only. Repeatable for credit toward the MS thesis option up to 6 hours. Prerequisite: prior consent of MS thesis advisor.

ECE 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.

ECE 878. MS Directed Project (1-3). A project conducted under the supervision of an academic advisor for the directed project option. Requires a written report and an oral presentation on the project. Graded S/U only. Prerequisite: consent of academic advisor.

ECE 886. Error Control Coding (3). Introduces error control codes, including Galois fields, linear block codes, cyclic codes, Hadamard 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 communications systems. Prerequisite: ECE 726.

ECE 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: ECE 752.

ECE 894. Advanced Computer Architecture II (3). Vector processors, memory-hierarchy design, input, and output. Prerequisite: ECE 844.

ECE 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: ECE 598.

ECE 898. Electric Power Quality (3). Measurement, analysis, modeling, simulation, and mitigation of electric power quality on the medium- and low-voltage distribution systems. Prerequisite: ECE 798.

ECE 976. PhD Dissertation (1-16). Graded S/U only. Repeatable for credit. Prerequisite: admission to doctoral aspirant status.

ECE 981. Co-op (1). A work-related placement with a supervised professional experience to complement and enhance the academic program. Intended for master’s-level or doctoral students in Electrical Engineering. Repeatable for up to 8 hours. May not be used to satisfy degree requirements. Prerequisites: departmental consent and a graduate GPA of at least 3.000. S/U only.

ECE 986. Wireless Spread Spectrum Communications (3). Explores what spread-spectrum communications is and why direct-sequence code-division multiple access (DS-CDMA) spread-spectrum is used for wireless communications. 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 band-limited waveform shaping filter, convolutional coding, interleaver, Walsh code orthogonal modulation, rake finger receivers, non-coherent Walsh orthogonal sub-optimal demodulation, other simultaneously supportable subscribers, and third generation CDMA. Prerequisite: ECE 726.

ECE 990. Advanced Independent Study (1-3). Arranged individual, independent study in specialized content areas in engineering under the supervision of a faculty advisor. Repeatable toward the PhD degree. Prerequisites: advanced standing and departmental consent.

ECE 993. Large Scale Control Systems (3). Sensitivity analysis of deterministic and stochastic systems; sources of uncertainty in control systems, e.g., plant parameter variation, time delays, small nonlinearities, noise disturbances, and model reduction; quantitative study of the effects of uncertainties on system performance; low-sensitivity design strategies, state and output feedback design; sensitivity function approach, singular perturbation, and model education techniques; adaptive systems; and near-optimal control. Prerequisite: ECE 893.

Industrial and Manufacturing Engineering (IME)

Graduate Faculty

Professors: Don Malzahn, Hossein Cheraghi (chairperson), Abu Masud

Associate Professors: Krishna K. Krishnan (graduate coordinator), Viswanathan Madhavan, Janet M. Twomey, Jamal Sheik-Ahmad, Lawrence Whitman

Assistant Professors: Michael Jorgensen, Gamal Weheba, Bayram Yildirim, Haitao Liao

The industrial and manufacturing engineering (IME) department at WSU is committed to instruction and research in design, analysis, and operation of manufac-
turing 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 their processing, design for manufacturing, foundations of Six Sigma and quality improvement, industrial ergonomics and safety, lean systems, and system engineering and management.

Facilities
The following facilities used in teaching and research are available for graduate students:

1. The Graphics Lab has 25 NT stations with CATIA, ARENA, and NeuralWare software.
2. The Manufacturing Metrology Lab has a Mitutuyo CMM, an optical comparator, and a host of metrology tools.
3. The CIM Lab has a CNC vertical machining center, a CNC lathe and a CNC Router.
4. The Cesna Manufacturing Processes Lab has several engine lathes, drill presses, and facilities for arc/gas welding, casting, and thermo-forming.
5. The Non-Traditional Machining Lab currently has an EDM machine.
6. The Rapid Prototyping Lab has a state-of-the-art rapid prototyping machine. It also has a portable CMM and laser-scanning machine which, along with the Rhino Software, can be used for reverse engineering applications.
7. The Virtual Reality Development Lab has head-mounted displays, a motion tracking system, computers, and a variety of software.
8. The Ergonomics/Human Factors Lab has a 3-D motion analysis system, EKG system, treadmill, bicycle ergometer, metabolic cart, load cells, audiometric chamber, and other measurement devices.
9. The Graduate Computing Lab, available only to IE/MEM students, has a number of PCs, all on engineering LAN.
10. The Open Computing Lab has several state-of-the-art PCs, laser printers, and a plotter all connected to the engineering LAN.

Curriculum and Research Tracks
The industrial and manufacturing engineering teaching and research tracks are clustered around the following three areas:

- **Engineering Systems.** Emphasizes 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.** Emphasizes 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.** Emphasizes 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 science 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 3.00, on a 4.00 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 213 on the computer-based or 580 on the paper-based TOEFL; 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 3.00 GPA 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 deficiency, 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 and 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 3.00 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 213 on the computer-based or 580 on the paper-based TOEFL; 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 a 3.00 GPA the minimum required graduate credit hours:
   - **Direct 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 5-8 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).
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 under the College of Engineering heading.

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 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 may apply certificate coursework toward a degree program. A cumulative graduate grade point average of at least 3.0 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):

- IME 558, Manufacturing Methods & Materials I
- IME 758, Analysis of Manufacturing Processes
- IME 768, Metal Machining Theory & Applications
- 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):

- AE 653, Basic Composite Materials Technologies
- AE 654, Manufacturing Composite Structures
- IME 778, Machining of Composites
- ME 762, Polymer Composite Materials

Design for Manufacturing

This program allows practicing engineers to enhance their design skills by selecting a sequence of complimentary courses that include knowledge of the product realization process and the impact of design considerations on manufacturing costs. Program prerequisites: IME 558, IME 254/724, 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, Tolerances in Design & Manufacturing
- IME 502, Manufacturing Measurement

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 Six-Sigma Black Belt (CSSBB) certification 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 prerequisites: 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, workplaces, 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 502, Manufacturing Measurement Analysis (3), 2R, 3L.
Covers methods for measurement and analysis of variables in the production of industrial parts. Topics include basic principles of measurement, data acquisition, data analysis, and interpretation methods, such as principles of gage design, gage capability studies, process capability studies, and sampling techniques. Includes a laboratory component to familiarize students with different kinds of measurement devices such as CMM, non-contact optical measurement devices, surface profilometers, optical flat, and automatic data collection. Prerequisites: IME 254 and IME 258.
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, operation planning and scheduling. Prerequisite: IME 254; Corequisite: IME 255.

IME 554. Statistical Quality Control (3). A study of the measurement and control of product quality using statistical methods. Includes acceptance sampling, statistical process control, and total quality management. Prerequisite: IME 254, or 724.

IME 556. 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 492 and ECE 138.

IME 557. Safety Engineering (3). Environmental aspects of accident prevention, industrial compensation, and safety legislation. Fundamental concepts of occupational health and hygiene. Prerequisite: IME 254 or STAT 471.

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 568. Manufacturing Tools (3). Introduces the principles behind the design and fabrication of machine tools and production tooling. Discusses tool materials; machine tool kinematics, accuracy; instrumentation, and control; and designing fixtures and jigs. Includes an introduction to design of inspection tools, machining and press working tools, and modular fixtureing. Application of theories to labs and design problems. Prerequisite: IME 258. Corequisite: AE 223.

IME 578. Post Cure Manufacturing of Composites. (3). This course deals primarily with post-cure processes used in the fabrication of fiber reinforced composite parts (FRPs), with particular relevance to the aircraft industry. These processes include trimming, drilling, countersinking, assembly and quality assessment. Major traditional and nontraditional machining processes are presented and the effect of process parameters, material parameters, and system parameters on the material removal rate, tool wear and the quality of the machined part are discussed. Participants will learn the advantages and disadvantages of each machining process, state of the art tools and tool materials, and how to select the most appropriate process for different materials and geometries. The course also contains hands on components emphasizing several key topics. Prerequisite: IME 258 or consent of instructor.

IME 590. Industrial Engineering Design I (3). An industry-based team design project utilizing industrial engineering principles; performed under faculty supervision. May not be counted toward graduate credit. Prerequisites: complete at least two of the following courses (IME 549, 553, 563) and be within two semesters of graduation.

IME 622. Computer-Aided Design and Manufacturing (3). Introduction to 3-D computer graphics. Discusses concepts of CAD/CAM/CIM, design theory, automation, and knowledge-based CAD systems. Examines the basic principles of computer-aided manufacturing, NC programming, and CAD/CAM integration. Describes the design interchange standards and the interface between CAD and CAM. Prerequisites: I EN 222 and ECE 229 or equivalent.

IME 654. Nontraditional Machining Processes (3). A study of the role and economics of nontraditional processes; use of laser and electron beams in inspection and measurement; heat treatment; material removal; material joining; and coating. Also covers the fundamentals of electro-discharge machining, electro-chemical machining, chemical milling, and water-jet machining. Prerequisite: IME 558.


IME 664. Engineering Management (3). An 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 690. Industrial Engineering Design II (3). Continuation of the design project initiated in IME 590 or the performance of a second industrial design project. May not be counted toward a graduate industrial engineering major. Pre- requisites: 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. Cannot be used to fulfill degree requirements for the BS degree in industrial and manufacturing engineering. 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. Explicit consideration of risk, uncertainty, and multiple attributes is developed and applied using modern computer-aided analysis 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). This course will introduce students to plasticity and build upon students' knowledge of mechanics and heat transfer in order to analyze various manufacturing processes. Numerical techniques (mainly Finite Element Analysis) as well as theoretical methods will be 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 will be 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 and IME 255.

IME 767. Lean Manufacturing (3). Introduces lean concepts as applied to the manufacturing environment. The course 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). This course provides basic understanding of the various conventional metal machining processes and the nature of various phenomena that occur in it. The course 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. Prerequisites: 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/CAD interfaces; information flow for CIM; shop floor control; and justification of CIM systems. Prerequisite: ECE 138 or knowledge of a programming language, IME 558.

IME 778. Machining of Composites (3). This course introduces students to a wide range of machining processes used in the secondary manufacturing of composites, focusing on scientific and engineering developments affecting the present and future of composites manufacturing. Major traditional and non-traditional machining processes are discussed. The effect of process parameters, material parameters, and system parameters on the material removal rate and the quality of the machined part are also discussed. Emphasis will be given to the application of non-traditional machining processes in the manufacture of fiber-reinforced polymers that are used in the aerospace and aviation industries. Students will learn the advantages and disadvantages of each machining process and how to select the most appropriate process for different materials and geometries. Prerequisites: AE 333, IME 578, or approval of instructor.

IME 780. Topics in Industrial Engineering (3). New or special courses are presented under this listing. Repeatable for credit when subject matter warrants.

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. Prerequisites: departmental consent and graduate GPA of 3.00 or above. Cr/NCr 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 (DSS) 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. The course deals with the analysis, design, implementation and operation of all elements associated with an enterprise. Includes business process re-engineering, 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 on-line 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). The course will introduce the use of an LSDYNA software package for metal forming simulations and discuss 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. Prerequisites: AE 722 or ME 650K or IME 780K.

IME 865. Modeling and Analysis of Discrete Systems (3). This course discusses analytical and experimental techniques for the modeling and analysis of discrete systems in general and manufacturing systems in particular. Students will utilize techniques such as simulation, Markov Chains, Queuing Theory, and Petri Nets to model manufacturing systems problems. Students will investigate issues related to the modeling and analysis of manufacturing systems through readings, lectures and projects. Prerequisite: IME 553 or instructor's consent.


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 882. Free-Form Surfaces (3). The objective of this course is for manufacturing engineering students to learn design of free-form surfaces and their manufacturing using various traditional and non-traditional methods. Topics that will be investigated include: geometric modeling, algorithms for curves and splines, lofting, blending of surfaces, surfaces using Coons patches and manufacturing analysis of surfaces, including rapid prototyping. Prerequisites: ECE 138 or computer programming experience, IME 622 or instructor's consent.

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 949. Work Physiology (3). The study of cardiovascular, pulmonary, and muscular responses to industrial work including aspects of endurance, strength, fatigue, recovery, and the energy cost of work. Utilization of physical work capacity and job demand for task design, personnel assignment, and assessment of work-rest scheduling. Prerequisite: IME 549.

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 976. PhD Dissertation (1-6). Graded S/U only. Repeatable for credit. Prerequisite: admission to doctoral aspirant status.

IME 990. Advanced Independent Study (0-3). Arranged individual, independent study in specialized content areas. Repeatable toward the PhD degree. Prerequisites: advanced standing and departmental consent.

Mechanical Engineering (ME)

Graduate Faculty

Professors: Behnam Bahr (chairperson), Hamid M. Lankarani, Jorge E. Talaia, Dennis Sigler
Associate Professors: David N. Koert, Bob Minaei, T.S. Ravigururajan
Assistant Professors: Ikram Ahmed (graduate coordinator), Brian Driessen, Kurt Socshinske

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 several areas of specialization, including engineering materials properties and failure modes; intelligent controls; robotics, and automation; multibody and impact dynamics; mechanical engineering design and manufacturing; thermal/fluid sciences and computational fluid dynamics and heat transfer (CFD); combustion; and heating, ventilating, and air conditioning (HVAC) and energy conservation.

Many departmental faculty members are associates of Wichita State's National Institute for Aviation Research (NIAR). This association makes faculty members available for research activities of the faculty and their graduate students. NIAR and department facilities include a computational fluid dynamics laboratory (CFD lab) with a Linux based network, a scanning electron microscope (SEM) located in the materials laboratory, the crash dynamics laboratory, the shock and vibration laboratory, the propulsion laboratory, the computer integrated manufacturing laboratory, and the mechatronics laboratory.

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

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 http://www.engr.wichita.edu/me/grad/grad.htm.

Doctor of Philosophy

Areas of research specialization for the Doctor of Philosophy (PhD) program are within those stated previously for the MS degree. Exact specializations will depend upon the student's dissertation advisor and graduate committee. Other details of the Doctor of Philosophy (PhD) program can be found under the College of Engineering heading. Additional information can be obtained at: http://www.engr.wichita.edu/me/grad/grad.htm.

Courses for Graduate/Undergraduate Credit

The courses numbered 502 through 760 are not automatically applicable toward an advanced degree in engineering. They must be approved by the student's advisor, the graduate coordinator, and the chairperson of the department. 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 with a grade of C or better.

ME 521. Fluid Mechanics (3).* Fluid statics. 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 with C or better and 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.* 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 534. Mechanical Engineering Design Laboratory (3). 2R, 3L.* The application of finite element analysis, computerized data analysis, heat transfer analysis, and other considerations for design of mechanical components and systems. Provides a blend of theory and practice. Corequisite: ME 439 or equivalent.

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 of current real engineering problems. Introduction to human factors, economics, and reliability theory. Group and individual design projects. Prerequisite: ME 439 with a grade of C or better.

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 primarily the major 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, plate, 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 439 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. Prerequisites: ME 439, 522 or equivalent, with a grade of C or better.
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 material warrants. Prerequisite: departmental consent.

ME 659. Mechanical Control Systems (3).* 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: ME 533, ECE 282, and MATH 555.

ME 662. Mechanical Engineering Practice (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 666. Materials in Manufacturing Processes (3). Deals with fundamental principles of materials and their applications to manufacturing processes. Prerequisite: ME 250.

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 719. 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 ride 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, actuators, 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, electromechanical 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. ECE 729, Linear State Space Controls, while not a prerequisite, will be 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). A basic understanding and knowledge about the structure and mechanical properties of polymeric composite materials in detail. Discusses both short fiber and continuum fiber composites. Emphasizes special design considerations for composite materials, including fracture mechanics and performance of composites under adverse conditions (fatigue and impact). Prerequisite: ME 250 and MATH 555, or equivalent, or departmental 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 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. Prerequisite: graduate standing, department's consent, and graduate GPA of 3.00 or above. Offered Cr/NCr only.

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 equations; 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, crashworthiness, and biodynamics. 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). Thermo-dynamics and mechanical aspects of interfacial phenomena, boiling, condensation near immersed surface, pool boiling, internal flow convective boiling, and condensation. Prerequisites: ME 522, MATH 555, or departmental consent.

ME 858. Computational Fluid Dynamics and Heat Transfer I (3). Basic finite difference/volume methods; finite difference/volume representation of partial differential equations; stability analysis; finite difference/volume methods for solution of heat and fluid flow equations; grid generation and use of modern computer codes/software for analysis and visualization. Prerequisites: ME 521 and 522 or equivalent.

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 utilizing the crystal structure background. Discusses nonequilibrium aspect of phase relaxation 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 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 metal-ceramics. 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 900. 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: 415 Jardine Hall
Rodney Miller, dean
Elaine Bernstorf, associate dean
Wendy Hanes, associate dean
John Boyd, coordinator for graduate studies in art
Tom Fowler, coordinator for graduate studies in music

School of Art and Design
Donald R. Byrum, chairperson
Art Education, (316) 978-3703—Donald R. Byrum, program director
Art History, (316) 978-7715—Frederick Hemans, program director
Graphic Design, (316) 978-7709—Jim Hellman, program director
Studio Art, (316) 978-3518—Ted Alder, program director

School of Music
J. William Thomson, chairperson
Music Education Studies, TBA, director
Musicology-Composition Studies, (316) 978-3532—Dean Roush, director
Keyboard Studies, (316) 978-3103—Paul E. Reed, director
Strings/Orchestra Studies, (316) 978-3103—Jackie Dillon, director
Voice/Choral Studies, (316) 978-3103—Dorothy Crum, director
Winds/Percussion/Band Studies, (316) 978-3103—Victor A. Markovich, director

School of Performing Arts
Steven J. Peters, chairperson
Dance, (316) 978-3645—C. Nicholas Johnson, director
Theatre, (316) 978-3668—Drew Tombrello, director

Fine Arts (FA)

Although there is no graduate degree in general fine arts, the following course is available for graduate credit.

Course 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.

School of Art and Design

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 a major 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 art work. Prerequisite: upper-division art major.

ARTE 515. Developing Visual Materials for Art Education (6). A production laboratory that emphasizes the integration and selection of appropriate visual media for art instruction. Prerequisite: ARTE 310 or equivalent.

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. Repeatable once for credit. Prerequisite: ARTE 302 or instructor's consent.

ARTE 710. Creative Behavior and Visual Thinking (3). Identification and application of theories for creative and critical thinking. Emphasizes strategies for problem-solving and visual thinking and procedures to implement those strategies. Student identifies an area for individual investigation. Repeatable once for credit.

ARTE 711. Seminar in Art Education: Topic to be Announced (1-3). Supervised study and research of contemporary issues in art education. Repeatable for credit with advisor's consent.

ARTE 712. Development of Art Understanding in the Educational Program (3). Includes readings, observation, and evaluative techniques in the development of concepts and materials for art understanding. Repeatable once for credit. Prerequisite: instructor's consent.

ARTE 713. Fiber and Fabric Processes (2-3). Fiber processes using traditional and experimental techniques in woven forms and other structural techniques using natural and man-made fibers. Repeatable once for credit. Prerequisite: instructor's consent.

ARTE 714. Aesthetics for the Classroom (3). Focuses on applying the issues and theories of aesthetics to the K-12 classroom. Students participate in discussions and demonstrations of these theories through critical and reflective writing as well as curricular planning. Students consider aesthetic development and construct lessons to integrate strategies involving aesthetic concepts into their teaching.

ARTE 715. Research Problems in Art Education (3). Orientation to research methods, findings, and designs related to the analysis of studies and current problems in art education. Repeatable once for credit. Prerequisite: instructor's consent.

ARTE 719. Electronic Imaging (1-3). Emphasizes Macintosh and other computer processes and their application to art and art education. Students generate computer images using digitizing, scanning, and animation with a variety of software and hardware. Makes application of this technology to problems of design, art history, and art criticism. Develops curriculum materials for art instruction employing computer-aided graphic instruction. The graduate student prepares a research paper on a selected topic related to computer graphics and art learning.

ARTE 750. Art Workshop (1-3). Repeatable for credit. Area to be covered is determined at the time course is offered.

Courses for Graduate Students Only

ARTE 815. Individual Research Problems in Art Education (1-4). Directed independent study in art education not normally covered in other graduate course work. Repeatable for credit. Prerequisite: instructor's consent.

ARTE 816-817. Thesis—Art Education (1-3; 1-3)

ARTE 818-819. Terminal Project—Art Education (1-3; 1-3)

Art History (ARTH)

Graduate Faculty
Assistant Professors: Annette LeZotte

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 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 the study 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.

Graphic Design—Commercial Art (ARTG)

Graduate Faculty
Associate Professors: James Hellman, Kirsten S. Johnson
Assistant Professors: Heather Boyce-Broddle, Jeff Pulaski

Although there is no graduate degree in graphic design, the following courses are available for graduate study.

Courses for Graduate/Undergraduate Credit

ARTG 530. Seminar in Graphic Design (3). Supervised study and research. Requires weekly consultation and reports. Repeatable for credit. Prerequisite: departmental consent.

ARTG 550. Graphic Design Workshop (1-3). Repeatable for credit. Area covered is determined at the time the course is offered.

Studio Art (ARTS)

Graduate Faculty
Professors: John Boyd (coordinator, graduate studies), Donald Byrum (chairperson, art/design), Ronald Christ
Associate Professor: Barry Badgett
Assistant Professors: Paul Flippin

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 is designed for 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 course work, the other general requirements of the Graduate School, with the additional requirement of a 3.000 grade point average in the major field of study (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 major field, and 20 hours of related work. Applicants should present examples of work for evaluation. They should submit 15 color slides (2" x 2") in their major area. All work should be identified with name, title, size, and media. Applicants should also include a short statement of their artistic philosophy. Also list all honors, awards, scholarships, exhibitions, special recognition for work in art, or services rendered through art. Three letters of recommendation should be forwarded. No application is considered until an application to Graduate School, transcripts, and the materials listed above are received. A stamped return envelope for all materials should be included.

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 major professor and the graduate art coordinator. Applicants should address all correspondence to the graduate art coordinator.

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 major area ..................... 23
* Studio courses in a minor option area ............... 12
** Courses in graduate-level art history, art seminar, and pertinent lecture courses. Directed readings, not to exceed 6 hours, may also be used to fulfill this requirement. ............... 12
ARTS 845, Professional Practices in Studio Art: Graduate .......................... 3
Terminal project in the major area ................. 10
Total .................................................. 60

* Minor option can be taken in one studio area, a variety of studio areas, or outside the student's major area.
** Final approval by student's advisor and graduate coordinator required.

The terminal project consists of an exhibition of original studio art work, 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 Plan of Study form leading to admission to candidacy for the degree no later than one month following the completion of 24 semester hours of graduate credit.

Graduate Review. MFA degree students must satisfactorily complete graduate reviews conducted in their major MFA area 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 advisor and graduate coordinator and must meet the transfer of credit conditions of the graduate school. A maximum of 24 semester 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 semester hours at WSU and the first graduate review. A maximum of 12 semester hours can be applied to a major field of study. 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 art coordinator, and the major professor is final. Graduate nondegree 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 art 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 filed by the major professor with the graduate dean before the end of the final semester. This procedure constitutes the terminal examination for MFA candidates.

Policy Toward Student Art

The School of Art and Design reserves the right to select and retain a maximum of three pieces from the graduate exhibition. MFA printmaking candidates may be required to deposit one print from any or each edition for the university collection.
General

Courses for Graduate/Undergraduate Credit

ARTS 570. Advanced Ceramics Studio I (4). Builds on ARTS 373. Investigates advanced studies of claybodies, glazes, and firing methods. Prerequisites: ARTS 375 and/or instructor’s consent.

ARTS 571 Advanced Ceramics Studio II (1-3). Second course in advanced 500-level series. Builds on ARTS 570. Prerequisites: ARTS 570 and/or instructor’s consent.

ARTS 572. Advanced Handbuilding Ceramics Studio I (4). First course in advanced 500-level series of handbuilding. Builds and expands on ARTS 572. Students investigate means of expression through various handbuilding techniques. Through critical analysis, students develop a personal statement with clay. Investigates advanced studies of claybodies, glazes, and firing methods. Prerequisite: ARTS 372 and/or instructor’s consent.

ARTS 573. Advanced Handbuilding Ceramics Studio II (4). Second course in advanced 500-level series of handbuilding. Builds and expands on ARTS 572. Prerequisite: ARTS 572 and/or instructor’s consent.

ARTS 574. Advanced Study of Kiln Methods (3). Advanced study of kiln design and construction with research in the area of refractory materials. 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 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 lab 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 notebook, advanced formulation records, and laboratory work. Prerequisite: ARTS 875.

ARTS 878-879. Terminal Project—Ceramics (1-5; 1-5).

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 850. Special Problems in Painting (1-5). Professional and experimental painting emphasizing the development of maturity, ideas, independent thinking, and personal expression. Mediums 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 550. Advanced Intaglio Print I (4). Fourth in a series of five classes for the printmaking major. Students may specialize in any of the various intaglio, relief, collagraph, papermaking techniques while emphasizing personal aesthetic development. Prerequisites: ARTF 145; ARTS 260, 360, and 362.

ARTS 551. Advanced Watercolor Studio (3). For the professionally oriented student. Emphasizes independent study. Repeatable for credit. Prerequisites: four semesters of ARTS 351 and interview with instructor.

ARTS 552. Advanced Decorative and Ornamental Painting and Design (3). Projects in decorative and ornamental painting and design developed and completed by the student with faculty supervision. Preparation for more independent work. A plan of study defining projects must be submitted and approved by the instructor. Prerequisite: ARTS 352 or instructor’s consent.

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 554. Advanced Painting I (4). For the professionally oriented student. Emphasizes independent study. Prerequisites: ARTS 358 and portfolio review.

ARTS 556. Advanced Painting II (4). Continued emphasis on independent study. Completion of a related body of work indicating artistic direction. Preparation for graduate study. Repeatable for credit. Prerequisite: ARTS 554.

ARTS 559. Terminal Project: Decorative and Ornamental Painting and Design (3). Supervised independent study. A plan of study for a project in decorative and ornamental art must be submitted for faculty approval prior to registration. Repeatable for credit. Prerequisite: ARTS 552.

Courses for Graduate Students Only

ARTS 851. Special Problems in Life Drawing (1-3). Drawing from life. Requires sketchbooks and/or portfolio. Repeatable for credit.

ARTS 855. 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 551. Advanced Watercolor Studio (3). For the professionally oriented student. Emphasizes independent study. Repeatable for credit. Prerequisites: four semesters of ARTS 351 and interview with instructor.

ARTS 552. Advanced Decorative and Ornamental Painting and Design (3). Projects in decorative and ornamental painting and design developed and completed by the student with faculty supervision. Preparation for more independent work. A plan of study defining projects must be submitted and approved by the instructor. Prerequisite: ARTS 352 or instructor’s consent.

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 554. Advanced Painting I (4). For the professionally oriented student. Emphasizes independent study. Prerequisites: ARTS 358 and portfolio review.

ARTS 556. Advanced Painting II (4). Continued emphasis on independent study. Completion of a related body of work indicating artistic direction. Preparation for graduate study. Repeatable for credit. Prerequisite: ARTS 554.

ARTS 559. Terminal Project: Decorative and Ornamental Painting and Design (3). Supervised independent study. A plan of study for a project in decorative and ornamental art must be submitted for faculty approval prior to registration. Repeatable for credit. Prerequisite: ARTS 552.

Courses for Graduate Students Only

ARTS 851. Special Problems in Life Drawing (1-3). Drawing from life. Requires sketchbooks and/or portfolio. Repeatable for credit.

ARTS 855. 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 551. Advanced Watercolor Studio (3). For the professionally oriented student. Emphasizes independent study. Repeatable for credit. Prerequisites: four semesters of ARTS 351 and interview with instructor.

ARTS 552. Advanced Decorative and Ornamental Painting and Design (3). Projects in decorative and ornamental painting and design developed and completed by the student with faculty supervision. Preparation for more independent work. A plan of study defining projects must be submitted and approved by the instructor. Prerequisite: ARTS 352 or instructor’s consent.

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 554. Advanced Painting I (4). For the professionally oriented student. Emphasizes independent study. Prerequisites: ARTS 358 and portfolio review.

ARTS 556. Advanced Painting II (4). Continued emphasis on independent study. Completion of a related body of work indicating artistic direction. Preparation for graduate study. Repeatable for credit. Prerequisite: ARTS 554.

ARTS 559. Terminal Project: Decorative and Ornamental Painting and Design (3). Supervised independent study. A plan of study for a project in decorative and ornamental art must be submitted for faculty approval prior to registration. Repeatable for credit. Prerequisite: ARTS 552.

Courses for Graduate Students Only

ARTS 851. Special Problems in Life Drawing (1-3). Drawing from life. Requires sketchbooks and/or portfolio. Repeatable for credit.

ARTS 855. 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 551. Advanced Watercolor Studio (3). For the professionally oriented student. Emphasizes independent study. Repeatable for credit. Prerequisites: four semesters of ARTS 351 and interview with instructor.

ARTS 552. Advanced Decorative and Ornamental Painting and Design (3). Projects in decorative and ornamental painting and design developed and completed by the student with faculty supervision. Preparation for more independent work. A plan of study defining projects must be submitted and approved by the instructor. Prerequisite: ARTS 352 or instructor’s consent.

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 554. Advanced Painting I (4). For the professionally oriented student. Emphasizes independent study. Prerequisites: ARTS 358 and portfolio review.

ARTS 556. Advanced Painting II (4). Continued emphasis on independent study. Completion of a related body of work indicating artistic direction. Preparation for graduate study. Repeatable for credit. Prerequisite: ARTS 554.

ARTS 559. Terminal Project: Decorative and Ornamental Painting and Design (3). Supervised independent study. A plan of study for a project in decorative and ornamental art must be submitted for faculty approval prior to registration. Repeatable for credit. Prerequisite: ARTS 552.
ARTS 563. Advanced Litho Print II (4). Fourth in a series of four printmaking courses for the printmaking student wishing to specialize in lithography. Stresses a professional emphasis on technical and aesthetic research in stone lithography. Prerequisites: ARTF 145; ARTS 260, 361, 363, and 561 or departmental consent.

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.

Courses for Graduate Students Only

ARTS 860. Special Problems in Printmaking—Intaglio (1-3). 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.

ARTS 868-869. Terminal Project—Printmaking (1-5; 1-5).

Sculpture

Courses for Graduate/Undergraduate Credit

ARTS 580. Advanced Sculpture Studio (1-3). Sculpture in any medium, emphasizing individual development and creativity. Repeatable for credit. Prerequisite: ARTS 380.

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.

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.

ARTS 888-889. Terminal Project—Sculpture (1-5; 1-5).

School of Music

J. William Thomson, chairperson
Julie Bees, 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 semester 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 semester 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 852, Introduction to Bibliography and Research; 851, Psychology of Music; 871, History and Philosophy of Music Education; and 830, Seminar in Music Theory. Three hours also are required in graduate music history.

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.

Examinations

All degree candidates in the School of Music must pass an oral comprehensive examination. The oral comprehensive examination for thesis candidates includes a defense of the thesis.

Music Education (MUSE)

Graduate Faculty

Professors: Elaine Bernstorf, Harold A. Popp, Thomas Wine
Associate Professors: Thomas Fowler

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 13 hours; 17 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, research seminar, and an extra hours option. Of these hours, 12 must be in courses numbered 700 or 800. Each Plan of Study must include 852, Introduction to Bibliography and Research; 851, Psychology of Music; 871, History and Philosophy of Music Education; and 830, Seminar in Music Theory. Three hours also are required in graduate music history.

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, rhythmic, 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 disfunctioning 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 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 and corps-style marching utilizing 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 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 S/U or Cr/NCr credits may be counted toward a graduate degree and must be taken in consultation with the graduate advisor 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 study enrollment requires departmental consent. Repeatable with departmental consent.

Courses for Graduate Students Only

MUSE 821. Administering Elementary Music (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 dysfunctioning 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. Prerequisite: MUSE 822 or concurrent enrollment.

MUSE 831. Developing the Child's Musical Understanding (3). Definition of understandings necessary for the attainment of musical awareness in the child. Directs 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 on the instrumental or choral emphasis under the MME degree. Prerequisites: instructor and departmental consent.


MUSE 851. Psychology of Music (2). An overview of music behaviors from a psychological perspective. Relates recent literature concerning human psychoacoustics; melodic, rhythmic, and harmonic perception; and major learning theories to current trends in music education.

MUSE 854. Research Seminar 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 875. Thesis Research (1-2).

MUSE 876. Thesis (2).

Music Performance (MUSP)

Graduate Faculty

Professors: Julie Bees, J.C. Combs, Dorothy Crum (director voice/choral), Harold Popp, Frances K. Shelly, Nicholas Smith, Sylvia Coats, Victor Markovich (director bands and winds/percussion), Vernon Yenne

Associate Professors: Deborah E. Baxter, John Harrison, Russell D. Widener, Catherine Consiglio, Nancy Luttrell, Marie King, Robert Glasman, Joan Lansing, Paul Reed (director, keyboard studies), Andrew Trechak

Assistant Professors: Jacqueline Dillon, 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. Permission to schedule the recital 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 more focus with more specialized course work, 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 will be 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. 12 credit hours in the MM core requirement, including 852, Introduction to Bibliography and Research (3); 830, Seminar in Music Theory (3); and 6 credit hours in selected graduate music history courses;
2. 10 credit hours of Applied Voice plus the 2 credit hours of Graduate Recital;
3. 12 credit hours of courses in the major area, including 632, Opera Literature (3); 760, Opera Styles (2); 773, Acting for Singers (3); 712K, Opera Leading Role (2); 711K, Opera Direction and Assistance (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 utilizing university students and ensembles; metropolitan or ad hoc ensembles may be substituted with faculty approval.

MM—Piano Accompanying Concentration
The Master of Music (MM) degree with 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 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)

1. 12 credit hours in the MM core requirement including MUSC 852, Introduction to Bibliography and Research (3), MUS 830, Seminar of Music Theory (3), and 6 credit hours in selected graduate music history courses.
2. 4 credit hours of Applied Piano (memorized jury examinations), MUS P 732P and 8 credit hours of Applied Accompanying, MUS P 723 (4), 724 (4).
3. 7 credit hours of support courses, including MUS C 580, Piano Pedagogy (3), MUS C 726, Vocal Literature (3), and MUS C 685, String Literature (2).
4. 2 credit hours, Terminal Project-Two Accompanied Full-hour degree recitals, MUS P 871 (1), MUS P 872 (1).

Applied Music Media Designations
A Bassoon P Piano
B Cello R String Bass
C Clarinet S Trombone
D Euphonium T Trumpet
E Flute U Tuba
F French Horn V Viola
G Guitar W Violin
H Harp X Saxophone
I Oboe Y Voice
J Organ Z Electric Bass
K Percussion

Applied Music Classes
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 nonmusic majors; not applicable to music degree requirements. Repeatable for credit.

General Performance (MUSP)
Courses for Graduate/Undergraduate Credit
MUSP 530. Musical Theatre Workshop (2). An interdisciplinary practicum course with opportunities for student performers to refine techniques by performing scenes from a variety of musical theatre genres, including opera, book musicals, and rock musicals. Advanced students gain experience in directing and choreographing under faculty guidance and supervision. Jr. or Sr. Musical Theatre, Dance, and Voice majors only; and/or permission of the instructors.
MUSP 555. Senior Project (1). Cross-listed as THEA 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.

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 217 or 218 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 217 or 218 or equivalent.

MUSP 707. Piano Repertoire (1). Gives performing and listening experience to piano performance majors. Repeatable for credit.

MUSP 710-711-712-713-714. Ensembles (1 except 710B, 711A, 712F [A Cappella Choir], 713B, 713F [Concert Chorale], 2). (A) Orchestra; (B) Symphonic Wind Ensemble; (C) Gospel Ensemble; (D) A Cappella Choir, University Singers, Concert Chorale; (E) Banda Hispanica; (F) Piano Accompaniment; (G) Madrigal Singers; Chamber Singers; (H) Woodwind Ensemble; (I) Saxophone Quartet; (J) Brass Chamber Ensemble; (K) Percussion Ensemble; (L) Beginning String Ensemble and String Chamber Ensemble; (M) Jazz Arts Ensembles I and II; (N) Guitar Ensemble; (O) International Choir; (P) New Music Ensemble. Prerequisite: audition required. Repeatable for credit.

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 714K. Opera Theatre (2). See MUSP 212K.

MUSP 714K. Opera Theatre (4). See MUSP 214K.

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 750. Music Performance Workshop (1-4). Repeatable for credit.

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 seventeenth century to the present. Prerequisites: professor's permission.

MUSP 770. Acting for Singers (3). A study of 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 (1-4). For individual or group instruction. Repeatable with departmental consent.

MUSP 790E. Musical Theatre and Opera Audition (3). Cross-listed as THEA 630. A practicum course which develops techniques and audition repertory singers will 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.

Courses for Graduate Students Only

MUSP 841. Special Project in Music (1-3). Individually supervised 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). Individually supervised 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 P 871. Graduate Accompanying Recital (1 hrs). 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 732 or 734.

MUSP P 872. Graduate Accompanying Recital (1 hrs). 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 732 or 734.

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 will also be required to perform a major piano work, prepared at acceptable recital level, during semester jury examination within the final year (two
several courses (one semester) 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 (director, musicology-composition)
Associate Professors: Sylvia 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 840A-C, 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 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 561. 18th Century Counterpoint (2). Counterpoint 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 C 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. Should be only 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 782-783. Piano Literature (3-3). Survey of the historical eras of professional piano repertory.

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 evoking the most interesting 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). Individually supervised study or research emphasizing the professional needs of the student. Repeatable for credit. Prerequisite: instructor’s consent.
DANC 545. Methods of Teaching Dance (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.

DANC 560. Advanced Composition (2). Original work in the large forms and a continuation and expansion of MUSC 659-660. Prerequisite: MUSC 660 or equivalent.

DANC 875. Thesis Research (2).

DANC 876. Thesis (2).

DANC 893. Music of Antiquity Through the Renaissance (3).

DANC 894. Music of the Baroque Era (3).

DANC 895. Music of the 16th Century (3).

DANC 896. Music of the 17th Century (3).

DANC 897. Music of the 18th Century (3).

DANCE 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 501 with instructor’s consent. Prerequisites: Concurrent enrollment in appropriate level technique class, senior standing.

DANC 605. Choreography for the Musical Theatre (3). Introduces the process of choreographing for the musical theatre from casting the chorus in a musical to staging a solo to choreographing an ensemble of 31 dancer/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 609. Special Topics in Dance (1-6). For individual or group instruction. Repeatable for credit with departmental consent.

Theatre (THEA)

Graduate Faculty

Associate Professors: Judith Babnich, Joyce Cavarozzi, Betty Monro

Assistant Professors: Daniel Williams

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). General education further study courses. 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 522. Academic Theatre Practicum (2). The investigation and exploration of the theatrical art 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 590. Theatre: Special Topics (2-3). Cross-listed as DANC 320 and 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 599. Directing I (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 599E. Musical Theatre Performance (1). Cross-listed as DANC 320 and MUSP 711U. See THEA 180E.

THEA 601. Directing the Musical (3). An interdisciplinary course utilizing interdepartmental expertise (theatre, dance, music) to teach the student how to produce a musical. Prerequisite: instructor’s consent.

THEA 622. Academic Theatre Practicum (2). The investigation and exploration of the theatrical art 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). General education further study course. 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). General education further study course. 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 will 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 scenicographic techniques and exercises in model building. Student designs 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 play scripts 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 course work. 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. Prerequisite: junior standing or departmental consent. Total of internship activity applicable toward graduation is 15 credits.

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.
College of Health Professions

Offices: 400 Ahlberg Hall
Peter A. Cohen, dean
Juanita S. Tate, associate dean & chair, School of Nursing
Charles R. Fox, associate dean, Academic Affairs and Research
Linda B. Black, director of student services

Communication Sciences and Disorders,
(316) 978-3240 — Kathy Coufal, chairperson
Dental Hygiene, (316) 978-3614 — Denise Maseman, chairperson
Medical Technology, (316) 978-3146 — Mary Conrad, chairperson
Physical Therapy, (316) 978-3604 — Camilla Wilson, chairperson
Physician Assistant, (316) 978-3011 — Richard Muma, chairperson
School of Nursing, (316) 978-3610 — Juanita Tate, chairperson

The College of Health Professions offers graduate programs leading to a Master of Science in Nursing, Master of Physician Assistant, Doctorate in Audiology, Doctorate in Communication Sciences and Disorders, and Doctorate in Physical Therapy. Admission to these programs requires a bachelor’s degree and the fulfillment of requirements listed for each program elsewhere in the Graduate Catalog.

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 lists; 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 to matriculate and/or graduate.

School of Health Sciences
The School of Health Sciences offers graduate programs leading to the Master of Physician Assistant, Master of Communication Sciences and Disorders, Doctor of Audiology, Doctor of Communication Sciences and Disorders, and Doctor of Physical Therapy degrees. Specific requirements for each degree are described under the appropriate listing below.

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. Prerequisites: 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: PHS 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
Professors: Kathy Coufal (chairperson), Barbara W. Hodson, Raymond H. Hull, Rosalind R. Scudder
Associate Professors: Harold T. Edwards, Julie W. Scherz
Assistant Professors: Anthony DiLollo, Chang Liu, Kathy Strattman, Xiao-Ming Sun, David Downs, Trisha Self

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. Upon completion, students are eligible to apply for Kansas licensure and certification by the American Speech-Language-Hearing Association.

Admission Requirements
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 or closely allied courses. Admission also requires an overall grade point average of 2.750 and 3.000 or above for the last 60 credit hours of the undergraduate degree program and in the undergraduate major field. Scores for the general aptitude section of the Graduate Record Examination must be submitted. The Graduate Record Examination must be taken within the last five years and the sum of the verbal and quantitative portions of the exam should equal 900 or better, with a minimum score on the analytical writing section of 3.000 for the MA and 3.500 for the AuD.

Students applying for the MA program must also attain a minimum score of 350 on each of the verbal and quantitative portions of the exam. Three letters of recommendation and a personal essay are required. 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 TSE score of 50 to be considered for admission to the MA or AuD programs (no waivers allowed).

Admission to the CSD doctoral 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. Minimum entrance requirements include: (a) Graduate Record Examination score of at least 1000 (verbal + quantitative) and 3.500 (writing) and (b) Grade Point Average of at least 3.500 in the last 60 hours of coursework. A professional resume and three letters of recommendation also are required. 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 (42-hour program). This program offers either a thesis option or a non-thesis option. A Plan of Study must be filed with the Graduate School after completion of 12 hours of graduate work.

The thesis option requires the presentation and oral defense of an acceptable thesis and the successful completion of the minimum credit hours required for that emphasis. Enrollment in CSD 895, Thesis, or 899, Thesis Research, is required for each semester in which the student is working with a faculty member on thesis research.

The non-thesis option requires the completion of one research credit/project, and the successful completion of the minimum credit hours required for the program emphasis. Comprehensive examinations are required during the last semester of the student’s program and may not be taken during any semester in which the student is on academic probation.

All degree program students must complete two tool subjects, each for 3 credit hours and with a minimum C letter grade. One course is in statistics, and the second is research methods. All students must enroll in a clinical practicum course each semester of enrollment. No more than 8 credit hours in clinical practice may count toward the minimum credit hour requirements for the MA. Clinical competence also must be demonstrated before the completion of the graduate program by meeting the ASHA clock hour practicum requirement (minimum of 350) practicum requirement for certification.

Students enrolled in the department’s clinical practicum courses are required to provide proof of medical clearance (negative tuberculin test) and purchase professional liability insurance coverage (not less than $1,000,000/$3,000,000) at the Speech-Language-Hearing Clinic prior to the start of the course. These requirements must be renewed annually. Semester clinical fees may also apply. At the graduate level, students are required to obtain a criminal background check at their own expense as part of the clinical placements.

Doctor of Audiology Requirements
The Doctor of Audiology (AuD) program requires a minimum of 115 credit hours and can typically be completed in four years. In addition, 9 hours of tool subjects in research methods, statistics, and 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.

Advancement to candidacy is contingent upon the successful completion of a written comprehensive examination taken during the third year. Completion of a doctoral essay, including an oral defense, is required of all candidates during their final year. Enrollment in CSD 998 is required for two consecutive semesters (maximum of 6 hours).

The fourth year of the AuD program involves a full-time residency in a hospital, clinical, or other audiology practice environment. To ensure that the placement will provide AuD candidates the best environment for that culminating experience, the placement of the candidate may not be in the metropolitan area of Wichita. Although WSU will have several 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 AuD program faculty. A competency-based evaluation of the students’ performance will be made at regular intervals throughout the clinical experience. Enrollment in CSD 997 is required, in consecutive semesters, for one calendar year (maximum of 18 hours).

All students must enroll in a clinical practicum course each semester of enrollment. Clinical competence must be demonstrated before the completion of the AuD program by meeting the ASHA clock hour practicum requirement (minimum of 2000) for certification.

Students enrolled in the department’s clinical practicum courses are required to provide proof of medical clearance (negative tuberculin test) and purchase professional liability insurance coverage (not less than $1,000,000/$3,000,000) at the Speech-Language-Hearing Clinic prior to the start of the course. These requirements must be renewed annually. Semester clinical fees may also apply. At the graduate level, students are required to obtain a criminal background check at their own expense as part of the clinical placements.

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 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 term (including the term 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 501. Speech and Hearing Science (3). Examines elements in the chain of events that lead to human communication. Studies speech production and perception at physiological and acoustical levels, emphasizing acoustics. Prerequisite: CSD 300, 306 or instructor consent.

CSD 510. Introduction to Diagnostics (3). Provides the principles underlying basic diagnostic processes for speech and language disorders across the life span. Teaches observation techniques, how to take case histories, beginning interview techniques, and how to administer and interpret formal and informal assessment measures. Requires observation of diagnostic procedures in the speech-language-hearing clinic. Prerequisites: CSD 416 and 514.

CSD 514. Speech-Sound Disorders (3). Discusses basic methods and procedures of identifying, assessing, analyzing, and remediating speech-sound disorders. Practice in phonetic transcription of highly unintelligible speech samples. Prerequisite: CSD 306.
CSD 516. Language III: Introduction to Assessment and Intervention—Birth to School Age (3). Discussion of current language intervention strategies and programs for infants, toddlers, preschoolers, and school-age children, birth to 8 years. Examination of the development of individual and family plans. Discussion of the multidimensional nature of language and culturally different language patterns. Requires observation of clinical intervention and a laboratory experience. Prerequisites: CSD 416 and 510.

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 519. Genetic and Organic Syndromes (3). Introduces human genetics and the impact of chromosomal and structural anomalies of communication disorders. Assessment and remediation of cleft palate speech. Prerequisite: CSD 300.

CSD 520. ASL: Nonverbal Communication (3). Non-verbal way of communication which forms an integral base for communication in American Sign Language. This course will emphasize the use and understanding of facial expression gestures, pantomime and body language. Role play and acting out will be required as part of this class. Prerequisite: CSD 370 or instructor consent.

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 540. Senior Seminar (2). An exploration of theories, principles, practices, and pitfalls of audiology and speech-language pathology emphasizing creating dynamic models for research interpretation, clinical interaction, and professional management. Examines the current educational, professional, and ethical issues in clinical practice.


CSD 605. Neurology of Speech and Language I: Basic Processes (4). A consideration of basic neuroanatomy 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 625. Introductory Methods and Practicum in Communication Sciences and Disorders (2). Techniques and methods for development of clinical skills in a supervised practicum in a supervised practicum setting.CLIENT with speech, language, and/or hearing disorders are the primary focus. Development of a philosophy of clinical processes includes procedures for therapy, writing behavior objectives and progress, and conducting parent/spouse/significant other conferences. Prerequisites: 25 clock hours of observation; grade of C or better in CSD 364, 366, 351, 416, 510 (may be concurrent); and 514, 2,750 cumulative and 3,000 GPA in the major; departmental application required one semester prior to enrollment; medical clearance and insurance.

CSD 655. Graduate Methods and Practicum in Auditory Assessment-SLP (2). Methods in audiologic evaluation for speech and language pathology students. Discusses procedures for diagnostic evaluation of a broad range of auditory disorders in infants, children, and adults in weekly class meetings, along with procedures for hearing screening, hearing aid maintenance and fitting, counseling, and others as appropriate. Speech and language pathology students engage in practicum experiences in audiologic screening and assessment as arranged. Prerequisites: CSD 251 and 351, medical clearance, and insurance.

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 740. Selected Topics in Communication Sciences and Disorders (1-3). Individual or group study in specialized areas of Communication Sciences and Disorders. Repeatable.

CSD 750. Workshop in Communication Sciences and Disorders (1-4). Offered periodically on selected aspects of Communication Sciences and Disorders. Repeatable.

CSD 770. Communication Development and Disorders (3). Identifies communication deviations, differentiating disorders from developmental and/or cultural/linguistic differences. Evaluates potential impact of various communication disorders on academic performance of individuals. Considers strategies for facilitating development of children’s communication skills in educational settings.

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 Cr/NoCr.

Courses for Graduate Students Only

CSD 800. Research Methods (3). A survey of different research methods utilized 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 and 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. Prerequisites: CSD 251 and 501.

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). Provides in-depth theoretical and clinical principles associated with the administration and interpretation of the basic comprehensive audiologic test batteries. Provides hands-on learning of auditory equipment and test batteries in tandem with the theoretical background for auditory assessment. Prerequisites: CSD 251 and 351.

CSD 805. Clinical Audiology II (3). Discusses diagnostic and rehabilitative procedures in the audiology clinic. Includes application of theoretical clinical principles toward the administration and interpretation of site-of-lesion and other special tests of auditory function beyond the traditional auditory test battery. Prerequisite: CSD 804.

CSD 806. Advanced Anatomy and Physiology of the Auditory System and Human Genetics (3). Begins with an overview of basic cell biology and progresses to the study of the anatomy and neurophysiology of the sensory hair cells of the cochlea, proteins associated with cochlear function, and understanding of protein mutations leading to genetic deafness. Addresses anatomy and neurophysiology of the central auditory system. Discusses DNA structure and function, modes of genetic transmission, the molecular aspects of deafness, applications of molecular testing for deafness, the ethical implications of genetic testing, and genetic counseling. Prerequisite: CSD 802.

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 electricity and electronics related to research and clinical application in audiology, including essential concepts and function of circuits and elec-
tronic devices 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 810. Neurology of Speech and Language II: Motor Speech Disorders (3). Studies speech disorders resulting from upper and lower motor neuron lesions in the central nervous system and emphasizes evaluation and treatment strategies for intervention. Prerequisite: CSD 605.

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. Neurology of Speech and Language III: Normal Aging, Aphasia, and Dementia (3). Examines the continuum of communicative abilities (including speech, language, hearing, and cognition) which may be seen in older persons. Covers normal aging as well as the influence of stroke, dementia, and other neuropathologies on communicative function in the elderly. Prerequisite: CSD 605 or instructor's consent.

CSD 813. Communication Disorders in Medical Settings (2). Provides the principles underlying a transdisciplinary teaming approach, emphasizing differential diagnosis and treatment of complex disorders found in medical settings. Discusses the fundamentals of private practice and legal issues in the practice of speech-language pathology. Prerequisites: CSD 810 and 812.


CSD 815. Assistive Technology for Special Populations (3). Provides information about assistive technology for persons with special needs across the life span (e.g., autism, cerebral palsy, and degenerative neurological disease). Considers physical, linguistic, and cognitive factors in the design and implementation of assistive technology resources. Studies augmentative and alternative communication systems and computer applications/modifications. Explores resources for funding.

CSD 816. Language Disabilities in Children and Adolescents (3). Examination of various approaches to working with children and adolescents with language disabilities. Practical application of language assessment procedures, individualized planning, and language intervention strategies. Language in the classroom for school-age children and adolescents and collaborative strategies. Multicultural literacy and the multidimensional nature of language in the classroom. Prerequisite: CSD 416 and 516 or departmental consent.


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. Prerequisites: CSD 300 and 510.

CSD 819. Acquired Brain Injury and Metacognitive Disorders Across the Life Span (3). Addresses issues of assessment and treatment of individuals with metacognitive, executive function, and behavioral disorders as a result of brain injury (traumatic, moderate, mild) and/or identified Attention Deficit Disorders (ADD), Attention Deficit with Hyperactivity Disorders (ADHD), Developmental Dyslexia (DD), Acquired Dyslexia (AD), and Specific Linguistic Impairments (SLI) influencing processing and production of narrative and discourse skills in oral and written language. Prerequisites: CSD 605 or equivalent and instructor's consent.

CSD 820. Graduate Methods and Practicum in Speech and Language Evaluation (2). Discusses clinical methods for evaluation and diagnosis of children and adults presenting with speech and/or language disorders. Prerequisites: CSD 510, medical clearance, and insurance.

CSD 821. Graduate Methods and Practicum in Educational Settings (7). Discussion and evaluation of student teaching experiences in public schools, demonstrations of applied clinical skills, counseling on the elementary and secondary school levels. Prerequisites: CSD 780 and 816, instructor's consent one semester prior to enrollment, medical clearance, and insurance.

CSD 822. Beginning Graduate Methods and Practicum in General Clinic (2 or 4). Provides an opportunity to relate theories and methods for students' assigned practica through discussion of various management techniques and methods with regard to different types of communication disorders and provides support for the present clinical experience. Prerequisites: CSD 625, medical clearance, and insurance.

CSD 823. Graduate Methods and Practicum in Medical Settings (4 or 6). Class discussions cover various topics pertaining to hospital and adult care practicum experiences. Relates theory and methods to student's practicum assignments. Prerequisites: CSD 813, department approval one year prior to enrollment, medical clearance, and insurance.

CSD 824. Graduate Methods and Practicum for External Placements (2). Techniques and methods for development of clinical skills in a supervised external practicum setting. Focuses on clients with language and speech sound disorders. Development of a philosophy of clinical processes includes procedures for therapy, writing behavior objectives and progress, and conduction of parent conferences. Supervised practicum of clinical assignments in off-site settings. Prerequisites: department approval one semester prior to enrollment, medical clearance, and insurance.

CSD 825. Graduate Methods, Practicum, and Diagnostics in Autism Spectrum Disorders (2 or 4). Techniques and methods for development of clinical skills in a supervised practicum setting. Primary focus on children with social language disorders. Practicum issues relate to current client needs. Prerequisites: CSD 516, 816 (can be concurrent), instructor's consent, medical clearance, and insurance.

CSD 826. Graduate Methods, Practicum, and Diagnostics in Language and Literacy (2 or 4). Techniques and methods for development of clinical skills in a supervised practicum setting (in the WSU Speech-Language-Hearing Clinic, “After-School Program,” and the College of Education’s Assessment, Intervention Multi-Disciplinary (AIM) program). Primary focus is on clients with language (oral and written) and literacy disorders. Development of a philosophy of clinical processes includes procedures for therapy, writing behavior objectives and progress, and conduction of client conferences. Prerequisites: departmental consent one semester prior to enrollment, medical clearance, and insurance.

CSD 827. Graduate Methods, Practicum, and Diagnostics in Voice (2 or 4). Techniques and methods for development of clinical skills in a supervised practicum setting (in the WSU Speech-Language-Hearing Clinic). Primary focus is on clients with voice disorders. Development of a philosophy of clinical processes includes procedures for therapy, writing behavior objectives and progress, and conduction of client conferences. Prerequisites: CSD 817, departmental consent one semester prior to enrollment, medical clearance, and insurance.

CSD 828. Graduate Methods and Practicum in Fluency (2 or 4). Develops advanced clinical skills in the diagnosis and treatment of children and adults presenting fluency disorders. Prerequisites: CSD 818, departmental consent one semester prior to enrollment, medical clearance, and insurance.

CSD 829. Graduate Methods and Practicum in Accent Modification (2). Lecture and discussion of techniques for foreign accent and dialect modification. Relates techniques to students' practicum experience in CSD 570. Attendance in CSD 570 required. Prerequisites: CSD 625, 822, department consent one semester prior to enrollment, medical clearance, and insurance.

CSD 830. Graduate Methods and Practicum in Early Language (4). Techniques and methods for development of clinical skills in a supervised early childhood interdisciplinary preschool practicum setting. Primary focus is on preschool children with language disorders. Development of a philosophy of clinical processes includes procedures for group and class-
CSD 835. Early Practicum Experience in Audiology (1). Students will experience guided observations of a variety of audiological activities. In addition, they will serve as an aide in diagnostic evaluations. Students will observe preparations for, administration of, and follow-up to clinical evaluations.

Limited hands-on experience will be included.

CSD 851. Medical Audiology (2). Many hearing disorders require evaluation/treatment by both the audiology 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. Industrial Audiology (2). Introduces the field of industrial and community hearing conservation and noise abatement. Includes the principles of establishing hearing conservation programs in industry and the federal regulations which guide those programs.

CSD 855. Pediatric and Educational Audiology (4). Reviews the anatomic and physiologic basis of auditory-evoked potentials generated from the peripheral and central auditory systems. Discusses techniques for the administration and interpretation of auditory-evoked potentials, including cochlear potentials (ECochG), the auditory brainstem responses (ABR), and the late occurring evoked potentials (MLR, ALAEPII, MMN, and P300). Use of evoked potentials in intraoperative monitoring will also be discussed. Lab component provides opportunities for hands-on learning and independently performing various auditory-evoked potential tests. Prerequisites: CSD 802, 804, and 806.


CSD 860. Amplification and Hearing Aids I (3). Study of hearing aids, including hearing aid design and components, electroacoustic characteristics and specifications, hearing aid plumbing, compression systems, and advanced signal processing schemes. Prerequisites: CSD 804 and 835.

CSD 861. Amplification and Hearing Aids II (3). Discusses candidacy for amplification; the prescribing, selecting, and verifying of hearing aid performance; problem-solving and fine-tuning of hearing aids; counseling in the hearing aid fitting process; and assessing the outcomes of hearing rehabilitation and non-standard hearing aid fittings. Prerequisite: CSD 860.

CSD 862. Pediatric Amplification (2). Covers the selection, evaluation, and validation of proper amplification with the pediatric population. Prerequisites: CSD 855, 860, and 861.

CSD 863. Professional Seminar in Audiology (3). An exploration of current topics in audiology that delve into principles, practices, innovation, conduct, and interpretation of research. Covers professional issues of the field that can impact the profession. Examines current professional, ethical, and service issues that can impact the practice of audiology.

CSD 865. Graduate Methods and Practice in Aural Rehabilitation (2). Provides students with experiences in the provision of aural habilitation/rehabilitation on behalf of hearing-impaired children and adults. Prerequisite: CSD 764 (can be concurrent).

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. Discusses techniques for the administration and interpretation of auditory-evoked potentials, including cochlear potentials (ECoCHG), the auditory brainstem responses (ABR), and the late occurring evoked potentials (MLR, ALAEPII, MMN, and P300). The use of evoked potentials in intraoperative monitoring will also be discussed. Lab component provides opportunities for hands-on learning and independently performing various auditory-evoked potential tests. Prerequisites: CSD 802, 804, and 806.

CSD 868. Diagnosis and Management of Vestibular Disorders (3). Provides information on the anatomy and physiologic of the human balance system and an overview of disorders/disease conditions and medications that can affect the balance system. Students learn procedures and interpretation of diagnostic tests used for the clinical evaluation of the functional status of the peripheral and central vestibular and balance systems. Discusses the unique aspects of balance disorders affecting the extremes of age—children and older adults—and addresses management techniques of balance disorders. Lab component provides opportunities for hands-on learning and independently performing tests for diagnosis and management of balance disorders. Prerequisites: CSD 605, 802, and 806.

CSD 886. Clinical Practicum in Audiology (2-4). Supervised clinical practicum at the WSU Speech-Language-Hearing Clinic and/or an off-campus clinical rotation site. Clinical expectations and responsibilities vary with the student’s level of experience and the requirements of the placement site. Practicum assignments are determined by each student’s competency needs, ASHA requirements, and availability of rotation sites. Prerequisites: CSD 835 or audiology faculty consent, medical clearance, and insurance.

CSD 890. Independent Study in Speech and Language Pathology or Audiology (1-3). Arranged individual, directed study in specialized content areas in speech and language pathology or audiology. Repeatable. Prerequisite: instructor’s consent prior to enrollment.

CSD 891. Non-Thesis Research Project (1). A directed research project which may include literature searches, data collection or interpretation of data. Topic of project to be determined by instructor. Repeatable, but total credit hours may not exceed three. Prerequisites: CSD 800 and department consent prior to enrollment.

CSD 892. Presentation of Research (1-3). A directed research project. Repeatable, but total credit hours may not exceed 3. Prerequisites: CSD 800 and instructor’s consent prior to enrollment.

CSD 895. Thesis Research (1-2). Repeatable, but total credit hours counted toward degree requirements must not exceed 2. Prerequisite: instructor’s consent.

CSD 903. Speech Perception (3). Focuses on the mechanisms of speech perception, including both auditory and linguistic processing through the life span. Covers aspects of psychoacoustics, perception of segmental and suprasegmental cues, and the top-down/bottom-up processing of information. Discusses speech perception in different communicative disorders such as specific language impairment (SLI) and central auditory processing disorder (CAPD), and with altered cognition and memory as seen after cerebrovascular accident (stroke) and dementia. Addresses effects of normal aging on speech perception. Prerequisite: CSD 605.

CSD 935. Advanced Practicum in Communication Sciences and Disorders (1-4). Supervised internship in one or more of the following sections: Client Management, Clinical Supervision, Academic Instruction, Research, and Clinical and Program Administration. Intended for doctoral students or advanced master’s level students. Repeatable; more than one section may be taken concurrently.

CSD 940. Advanced Selected Topics in Communication Sciences and Disorders (1-4). Advanced individual or group study in specialized areas of Communication Sciences and Disorders. Intended for doctoral students or advanced master’s level students. Repeatable.

CSD 990. Advanced Independent Study in Speech and Language Pathology, Audiology, or Speech Science (1-3). Arranged individual, directed study in specialized content areas in speech and language pathology, audiology, or speech sciences. Repeatable. Prerequisites: advanced standing and instructor’s consent.

CSD 992. Advanced Presentation of Research (1-3). A directed research project for doctoral students culminating in a manuscript appropriate for publication.

CSD 995. Research Proseminar (1). A weekly seminar of informal discussion and formal presentation of ongoing or planned research by the CSD faculty and doctoral graduate students. Goal is to provide CSD doctoral students with new

Health Professions
and valuable knowledge and insights regarding how real world research is performed. Prerequisite: doctoral student standing.

CSD 996. University Teaching (1). A weekly seminar on university teaching. The pedagogy, theories, and research of teaching will be discussed through presentation of readings, observation of teaching, and teaching experiences. The goal is to provide doctoral students with information and experience in university teaching. Repeatable. Prerequisite: doctoral student standing.

CSD 997. Audiology Residency (6). Full-time supervised clinical experience at an approved clinical facility. Repeatable. Prerequisites: successful completion of 3 years in the AuD program and the comprehensive examination.


Medical Technology (MEDT)

Course for Graduate Students Only

MEDT 800. Seminar in Laboratory Sciences (1-3). Discusses recent issues and advances in the field of clinical laboratory science, including the areas of microbiology, chemistry, hematology, immunology, and immunochemistry. Students are responsible for assigned topics, using current journal articles as a resource material. Prerequisite: departmental consent.

Physician Assistant (PA)

Graduate Faculty
Associate Professors: Charles Fox, Richard Muma (chair person), LaDonna Hale
Assistant Professors: David Day, Sue Enns, Audrey Griffin, Ruth Pickard, Timothy Quigley
Instructor: Patricia Bunton

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 Degree of Physician Assistant. The course of study is divided into two parts: a 41-semester-hour didactic phase and a 39-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 family practice, general internal medicine, pediatric, prenatal care and gynecology, general surgery, emergency medicine, psychiatry and behavioral medicine, and geriatrics. 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:

A. A bachelor degree from a regionally accredited U.S. college or university will be required prior to matriculation with additional prerequisite coursework below if not included in the bachelor 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 degrees will be decided on an individual basis and after evaluation by a transcript evaluation service.

1. CHEM 211 (5 hrs.) General Chemistry and screening tests). Students, at their own expense, must also be certified in cardiopulmonary resuscitation and automated external defibrillation (CPR and AED) prior to entering the program.

Special Requirements

Students will be required to purchase uniforms and other clinical apparel, 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 of the 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 four 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

**Summer Semester**

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<tr>
<th>Course</th>
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<tr>
<td>PA 789</td>
<td>Clinical Anatomy (3)</td>
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**Fall Semester**

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<td>PA 700</td>
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<tr>
<td>PA 725</td>
<td>Physician Assistant Theory II (3)</td>
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<td>PA 715</td>
<td>Physician Assistant Practice (3)</td>
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<td>PA 726</td>
<td>Physician Assistant Research Methods (3)</td>
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**Spring Semester**

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<tr>
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<td>PA 720</td>
<td>Pathophysiologic Assessment I (5)</td>
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<tr>
<td>PA 723</td>
<td>Pathophysiologic Assessment II (5)</td>
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<tr>
<td>PA 733</td>
<td>Pathophysiologic Assessment III (3)</td>
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<tr>
<td>PA 736</td>
<td>Applied Clinical Practice (3)</td>
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<tr>
<td>HS 711</td>
<td>Pharmacologic Mgmt. of Acute &amp; Chronic Diseases (3)</td>
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### Second/Clinical/Research Year

**Summer Semester**

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<td>PA 810</td>
<td>Advanced Clinical Management Rotation I (3)</td>
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**Fall Semester**

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<td>PA 818</td>
<td>Advanced Clinical Management Rotation IV (3)</td>
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<td>PA 832</td>
<td>Clinical Assessment Seminar (3)</td>
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<td>PA 897</td>
<td>Directed Study in Research II (2)</td>
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**Spring Semester**

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<tr>
<td>PA 819</td>
<td>Advanced Clinical Management</td>
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**PA 720. Pathophysiologic Assessment I (5).** An advanced pathophysiologic and clinical assessment/management course of the cardio pulmonary and gastrointestinal systems that builds on prerequisite coursework. Covers normal physiology, major disease pathophysiology, diagnosis, treatment, prognosis, and disease prevention as it relates to pulmonary and gastrointestinal 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. Corequisite: PA 723 and 733.

**PA 723. Pathophysiologic Assessment II (5).** An 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 rectal examination and urinary catheterization. Prerequisite: admission to PA professional program. Corequisite: PA 720 and 733.

**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 evaluation, treatment 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 III (3).** An advanced pathophysiologic and clinical assessment/management course of the EENT, neuro musculoskeletal, and dermatologic systems that builds on prerequisite coursework. This course covers normal physiology, major disease pathophysiology, treatment, prognosis, and disease prevention as it relates to EENT, neuromusculoskeletal, 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. Corequisite: PA 720 and 723.

**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 (S). 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 pro-section 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/seminar course geared toward the second-year physician assistant student. Primary focus is to assess cognitive and clinical skills as required by 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 advisor 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 advisor 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 advisor to plan and 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 journal 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 on 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.

Physical Therapy (PT)
Graduate Faculty
Professor: Kenneth Pitetti
Associate Professors: John Carter, Kathleen Lewis, Barbara Smith, Camilla Wilson (chairperson)
Assistant Professors: Robert Manske, Michael Reiman

Doctor of Physical Therapy
The program prepares individuals to enter beginning practice as a physical therapist. 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: 3.00 GPA in the last 60 semester credit hours; 3.00 GPA in prerequisite courses; and 3.00 overall GPA. Receive a “C” grade or better 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. Evidence of computer proficiency for word processing, spreadsheets, and using the Internet.
5. Physical Therapy clinical observation of twenty (20) hours in one or more physical therapy departments.
6. International students must submit a minimum TOEFL score of 600 paper-based, 250 computer-based, or 100 Internet-based.
7. Official scores from the General Aptitude section of the Graduate Record Examination (GRE), taken within the last five years.

To be reviewed for admission, applicants should do the following:
1. Seek an application packet from the Department of Physical Therapy and the Graduate School.
2. Submit the designated Application for Admission and supporting transcripts to the Graduate School.
3. Submit the designated Physical Therapy Application, along with two references by the published deadline, and the $20 program application fee.

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 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 website: www.wichita.edu/pt

Degree Requirements
The student must maintain a 3.000 GPA as required by the Graduate School and achieve a grade of “C” or better in each of the following courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>First Year</td>
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<tr>
<td><strong>Summer Semester</strong></td>
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<tr>
<td>PT 700, Pathophysiology for Physical Therapists</td>
<td>[3]</td>
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<tr>
<td>PT 708, Introduction to Professional Practice</td>
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<tr>
<td>PT 709, Foundations of Therapeutic Exercise</td>
<td>[3]</td>
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<tr>
<td>PT 721, Clinical Practicum &amp; Seminar I</td>
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<tr>
<td><strong>Fall Semester</strong></td>
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<tr>
<td>PT 725, Anatomy for Physical Therapists</td>
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<tr>
<td>PT 731, Clinical Kinesiology</td>
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<td>PT 736, Physical Agents</td>
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<tr>
<td>PT 741, Clinical Practicum &amp; Seminar II</td>
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<tr>
<td>PT 751, Foundations of Research</td>
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<tr>
<td>PT 755, Clinical Pharmacology for Physical Therapists</td>
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<tr>
<td><strong>Spring Semester</strong></td>
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<tr>
<td>PT 761, Clinical Practicum &amp; Seminar III</td>
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<tr>
<td>PT 770, Musculoskeletal Clinical Medicine</td>
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<td>PT 771, Critical Inquiry I</td>
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<tr>
<td>PT 772, Foundations of Clinical Skills</td>
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<tr>
<td>PT 773, Neuroscience I</td>
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<tr>
<td>PT 774, Neuromuscular Interventions I</td>
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<tr>
<td>PT 781, Foundations of Musculoskeletal</td>
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<tr>
<td>Examination and Intervention</td>
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<tr>
<td>PT 788, Lifespan of the Adult</td>
<td>[2]</td>
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<tr>
<td>PT 791, Principles of Orthotics</td>
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<tr>
<td><strong>Second Year</strong></td>
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<td><strong>Summer Semester</strong></td>
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<td>PT 800, Clinical Education I</td>
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<tr>
<td>PT 850, Clinical Education II</td>
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<tr>
<td><strong>Fall Semester</strong></td>
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<tr>
<td>PT 821, Professional Practice I</td>
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<td>PT 831, Musculoskeletal Management of the Upper Quarter</td>
<td>[3]</td>
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<td>PT 848, Lifespan of the Older Adult</td>
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<tr>
<td>PT 851, Critical Inquiry II</td>
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<tr>
<td>PT 853, Neuroscience II</td>
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<tr>
<td>PT 854, Neuromuscular Interventions II</td>
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<tr>
<td>PT 857, Clinical Practice of Acute and</td>
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<tr>
<td>Integumentary Conditions</td>
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<td><strong>Spring Semester</strong></td>
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<tr>
<td>PT 861, Professional Practice II</td>
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<tr>
<td>PT 871, Critical Inquiry III</td>
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<tr>
<td>PT 873, Neuroscience III</td>
<td>[2]</td>
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<tr>
<td>PT 874, Neuromuscular Interventions III</td>
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<tr>
<td>PT 877, Clinical Practice in Cardiovascular &amp; Pulmonary Conditions</td>
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<td>PT 881, Musculoskeletal Management of the Lower Quarter</td>
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<td>PT 888, Lifespan of the Infant and Child</td>
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<tr>
<td>PT 899, Principles of Education</td>
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<tr>
<td><strong>Third Year</strong></td>
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<td><strong>Summer Semester</strong></td>
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<tr>
<td>PT 900, Clinical Education III</td>
<td>[8]</td>
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<tr>
<td>PT 901, Professional Practice III</td>
<td>[2]</td>
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<tr>
<td>PT 911, Musculoskeletal Management of the Spine</td>
<td>[3]</td>
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<tr>
<td>PT 990, Clinical Conference I</td>
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<tr>
<td>Electives: Students may take up to 3-4 credit hours.</td>
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<tr>
<td><strong>Fall Semester</strong></td>
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<tr>
<td>PT 970, Clinical Education V</td>
<td>[8]</td>
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<tr>
<td>PT 975, Diagnostic Imaging for the Physical Therapist</td>
<td>[1]</td>
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<tr>
<td>PT 991, Clinical Conference II</td>
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<tr>
<td>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, PT 799, PT 840, PT 932, PT 933, PT 934, PT 941, PT 942, PT 943, or PT 951.</td>
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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). This course focuses on the differentiation of major disease pathophysiologic 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). This course 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 will be emphasized.

PT 709. Foundations of Therapeutic Exercise (5). An introduction to the scientific principles of therapeutic exercise foundations and techniques for physical therapists. This course is designed to follow the Guide to Physical Therapist Practice. Laboratory sessions will include skill development for safe, effective use of commonly used therapeutic exercise equipment.

PT 721. Clinical Practicum & Seminar I (2). This is 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 will be examined.

PT 725. Anatomy for Physical Therapists (6). This course presents a regional approach to the structure of the human body, utilizing supervised dissection of human cadavers, observation of prosected materials, radiographic films and anatomical models. Emphasis is placed on surface anatomy and the neuromuscular, cardiovascular and skeletal systems.

PT 731. Clinical Kinesiology (3). This course details and analyzes kinesiological and biomechanical foundations that are required to differentiate causes of musculoskeletal dysfunction.

PT 736. Physical Agents (4). This course presents concepts and practical applications of a host of therapeutic modalities. Indications, contraindications and the appropriateness of these modalities will be assessed.

PT 741. Clinical Practicum & Seminar II (2). This is 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 will be 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 will be 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). This is 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 will be examined.

PT 770. Musculoskeletal Clinical Medicine (2). This course differentiates etiology, diagnosis, pathology, medical treatment, and prognosis for orthopedic conditions that are managed by physical therapists.

PT 771. Critical Inquiry I (2). This is first in a series of three consecutive research application courses following Foundations of Research for physical therapy and related disciplines. In this first course, students work with an assigned advisor 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. This course 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 will be assessed and evaluated.

PT 778. Lifespan of the Adult (2). This course focuses on the relationship of structure and function to the development of movement skills in adulthood.

PT 780. Selected Topics in Physical Therapy (1-4). Intensive study of current issues, technology, research, and application of selected topic.

PT 790. Principles of Orthotics (1). This course 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 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). This is 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. The primary focus of this course is health policy and health systems.

PT 831. Musculoskeletal Management of the Upper Quarter (3). This course focuses on the relationship of structure and function to the development of movement skills through older age. Second of three courses.

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. Lifespan of the Older Adult (2). This course 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). Continuing development of physical therapy care in varied settings requiring communication and interpersonal relations skills; professional socialization; application of physical therapy procedures; continuing development of a generalist in physical therapy.

PT 851. Critical Inquiry II (2). This is the second in a series of three consecutive research application courses following Foundations of Research for physical therapy and related disciplines. In this second course, students work with an assigned advisor to collect data, complete statistical analyses (as appropriate), and 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. This course 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 will be assessed and evaluated.

PT 857. Integumentary Conditions & Other Medical Interventions (4). This course 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 will be discussed relative to these conditions.

PT 861. Professional Practice II (2). This is 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 of this course is health regulation and administration theory and principles.

PT 871. Critical Inquiry III (2). This is the third in a series of three consecutive research application courses following Foundations of Research for physical therapy and related disciplines. In this third course, students work with an assigned advisor 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. This course 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 will be assessed and evaluated.
PT 877. Clinical Knowledge & Practice in Cardiovascular & Pulmonary Conditions (2). This course develops clinical skills in the examination, assessment and managing patients/clients with cardiovascular and pulmonary impairments. Common pathophysiology of the cardiovascular and pulmonary system will be covered.

PT 881. Musculoskeletal Management of the Lower Quarter (3). This course reviews the basic scientific foundation and clinical rationale used during evaluation, assessment and treatment of musculoskeletal conditions of the lower quarter. This course further elaborates on the foundations brought forth from various courses during the first year of the DPT curriculum. It evokes an in depth study of different injuries and lesions, specific evaluation techniques, and treatments of those injuries and pathologies. Emphasis will be placed on organizing and synthesizing information from courses throughout the physical therapy curriculum to allow integration and problem solving skills that will enable students to better make the transition from students to competent practicing physical therapists.

PT 898. Lifespan of the Infant & Child (2). This course 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). This course 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 will be included.

PT 900. Clinical Education III* (8). First in a series of three eight-week courses offering continued development of clinical management of patients in varied clinical settings. Includes managerial aspects of care, teaching and some opportunities for clinical research.

PT 901. Clinical Education IV* (8). Second in a series of three eight-week courses offering continued development of clinical management of patients in varied clinical settings. Includes managerial aspects of care, teaching and some opportunities for clinical research.

PT 902. Clinical Education V* (8). Last in a series of three eight-week courses offering continued development of clinical management of patients in varied clinical settings. Includes managerial aspects of care, teaching and some opportunities for clinical research.

PT 903. Advances in Orthotics for Orthopedics (1). This course examines 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 and lower extremities and orthotics prescription, ordering, fabrication and fitting will be covered.

PT 904. PT Program Planning, Implementation and Evaluation I (2). This is the first of two courses in which the student will develop a service learning or clinical program with five primary components: needs analysis, program proposal, marketing, delivery, and assessment.

PT 905. Evidence Based Research (1). This course focuses on the use of current best evidence from clinical care research in the management of patients. Transitional DPT students will 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 continued development of clinical management of patients in varied clinical settings. Includes managerial aspects of care, teaching and some opportunities for clinical research.

PT 990. Clinical Conference I (1). Clinical Conference (CC) is a forum for discussion of a clinical case presented by a group of students. The focus of this course 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. The focus of this course 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.

Public Health Sciences (PHS)

Graduate Faculty

Peter Cohen, dean

The Department of Public Health Sciences no longer offers the Master of Public Health degree. A graduate
A graduate certificate in public health is available for individuals whose primary goal is core public health training.

Master of Public Health (MPH)
Developing Leadership Capacity to Promote a Healthy Society
After due consideration, the university has decided to suspend the MPH program at the conclusion of the Spring 2006 semester. All current students will be afforded the opportunity to complete the coursework through Spring 2006 and graduate from an accredited program. 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 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 course work in gerontology or long-term care, management concepts, and finance or accounting. The required courses are available through the Department of Public Health Sciences, for those interested applicants who have not taken such coursework prior to considering a career as a nursing home administrator. The Master of Public Health provides program majors with the course work required for AIT placement. Interested program majors may pursue the AIT requirements while completing their degree program. Additional information on the AIT is available through the Department of Public Health Sciences.

Graduate Certificate in Public Health Program
A graduate certificate in public health provides documentation that you have completed a core set of public health courses beyond the bachelor’s degree level. Through the graduate certificate in public health program you will bring population-based health knowledge to your 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. You can complete the coursework (15 credit hours) in 12-24 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.

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. Assessment of work experience will be conducted on the basis of written job description(s) or other description(s) of the scope of duties obtained from prior or current employer(s).

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, 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 3.00 or above and no grades below C. Students must complete the following courses:

PHS 804, Principles of Statistics in Health Sciences
PHS 808, Principles of Epidemiology
PHS 812, Health Care Policy and Administration
PHS 814, Social & Behavioral Aspects of Public Health
PHS 816, Environmental Health

The deadline for application 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

PHS 643. Geographic Information Systems (3). This course provides hands-on learning of ArcView, the Geographic Information System (GIS) that uses computer mapping to identify and illustrate the presence and distribution of community assets and needs. Taught in the Computer lab in our College of Health Professions, each student is assisted in mastering this powerful analytical tool. Public health data captured in the low-income, multiethnic neighborhood of Planeview, our community learning partnership site, provide exciting real-world problems for students to explore and analyze through various mapping techniques. Students learn the utility of mapping for linking theory and research with program planning and policy development.

PHS 660. AIT Long-Term Care Practicum (3, 6 or 9). Needs for health services will increase dramatically in the future because of the rising increase in the elderly population. A broad range of services, including long-term care, is required to address the health care needs of the older population. The Administrator-in-Training (AIT) Practicum is an academic long-term care administrator-training program. The purpose of the AIT is the development of a professional competency and personal code of ethics for the field of long-term care administration. The course prepares students for the state nursing home administrator licensure examination. The 480 clock hour practicum is completed in a licensed long-term care facility, under the guidance of an approved preceptor. Prerequisites: Undergraduates must have senior standing. All students must have course work in gerontology/long-term care, leadership, and financing/accounting; may take one course concurrent with the AIT practicum.

PHS 663. Community Action Research (3). This course is one of a series of community epidemiology courses that focus on community assessment and development. Community action research is an applied, interdisciplinary field in which hands-on learning occurs while inviting participation of the target population. Action research has three basic components: 1) it deals with social practices (e.g., help seeking behaviors) that are potentially mutable (able to be improved); 2) it spirals through cycles of planning, acting (initiating and intervention), observing (collecting & analyzing data) and reflecting; and 3) it involves collaboration between the researchers, those who engage in the social practices of interest and those who are affected by them. The class learns to develop case studies and collects data through face-to-face surveys of neighbors in Planeview, our community learning partnership site.

PHS 684. Principles of Epidemiology (3). This course is intended as an introductory in statistics for graduate students in the social and health sciences with little or no background in statistics. Its purpose is to provide 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 804. Principles of Statistics in the Health Sciences (3). This course provides 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 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, interests of consumers and providers, and ethics.

PHS 814. Social & 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 in 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. We first examine the meaning of the key terms "community", "community-building" and "community development" within historical and contemporary perspectives. We learn the importance of starting with such questions as "whose community?", "whose health?", "whose assessment?" and "for whose benefit?" We review strategies for community mapping, issue selection, community organizing, and coalition building. We then study several approaches for identifying community needs, including the organizing, and coalition building. We then study several approaches for identifying community needs, including the use of secondary data sources, interview methods, focus groups and surveys. Finally, we apply our 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)**. This course 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 825. Politics of Health Policy Making (3)**. This course covers the basic principles of public policy making in health care and public health. It then offers the opportunity to students to apply that knowledge in a community-based attempt to impact a public health policy development. It is a 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 that currently work, and those who are planning to work, in the health care field to understand the underlying dynamic of the insurance process. In this course the student is introduced to the concept of risk and the role of insurance in handling risk. It also examines health care expenditures as an insurable event; health insurance and managed care as a form of risk handling.

**PHS 832. Financing Health Care Services (3)**. Provides an examination of the principles of financial analysis and management used in health care institutions, which are most useful to non-financial personnel. It emphasizes understanding and application of general financial concepts to health setting and includes consideration of financial organization, sources of operating revenues, budgeting and cost allocation.

**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 834. 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 838. Applied Data Analysis (3)**. This course will teach: 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 840. Practicum (1-6)**. Links academic studies with actual practice through observation and participation in the administrative and educational processes of public, voluntary, and private health organizations, under the direction of a preceptor from the host agency. Prerequisites: students must meet with their faculty advisor at least one semester prior to seeking to enroll in the practicum; faculty advisor's consent.

**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 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)**. This course is designed to familiarize students with the factors influencing successful collaboration in public health. The course emphasizes the application of this material to the development of community-based coalitions/alliances/committees/partnerships. Course format will include lecture, group and individual examination of the literature, analysis of case studies, and fieldwork.

**PHS 848. Concepts of Quality (3)**. Quality of health care is a much discussed concept that is currently receiving a great deal of attention. Unfortunately, with all of the attention from a variety of providers, third-party payers, employers and other client organizations, considerable confusion regarding the definition and measurement of quality has arisen. Not only is there a tendency to use the word "quality" as an adjective rather than a noun, each of the constituent players adopt their own definition for their own purpose. This course is designed to provide the student with the conceptual underpinnings provided by the scholarly approach to the definition and assessment of quality of health care, which will permit the various quality assessment and improvement methodologies to be placed in context.

**PHS 850. 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 systemic 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 867. 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 advisor and instructor consent.

**PHS 885. Thesis (1-3)**. Repeatable to a maximum of six hours. Prerequisite: Consent of thesis advisor.

**School of Nursing (NURS)**

**Graduate Faculty**

Professor: Donna Hawley (director of Institutional Research), Alicia Huckstadt (director of graduate program), Janice Riordan, Elaine Steinke, Associate Professors: Juanita Tate (CHP associate dean and chair), Betty Smith-Campbell

Assistant Professors: Betty Elder, Loretta Forlaw, Karen Hayes, Mary Koehn, J. Bryan Mann, Martha
Shawver (associate vice president of Academic Affairs)

**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.

**Admission Requirements**
In addition to the general university requirements for admission to graduate studies (see the Graduate Catalog 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 or those seeking the RN to BSN/MSN accelerated plan 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 last 60 hours for full standing.
4. School of Nursing approval.
5. Evidence of Registered Nurse licensure in Kansas.
6. Coverage by professional liability insurance in the 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 skills is essential.
9. A clinical learning background check is required. The School of Nursing can provide details for obtaining the background check.

**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.

**Options Available**
**Clinical Nurse Specialist (39-42 hrs)**
Adult Health and Illness
Pediatrics
Nurse Practitioner (45-46 hrs)

**Nurse Practitioner**
Acute Care
Family
Pediatrics
Psychiatric/Mental Health
Nurse Midwifery (42 hrs); offered in collaboration with the University of Kansas.
Nursing and Health Care Systems Administration (42 hrs): Dual Degree MSN and MBA (63 hrs); offered in collaboration with the W. Frank Barton School of Business.

**Graduate Certificates (Post Master's)**
**MSN Degree for ARNP's**

**Clinical Nurse Specialist**
*Adult Health and Illness (39-42 hrs)*
**NURS 701/702,** Advanced Health Assessment /Lab .2/1
**NURS 703,** Scientific Inquiry I .3
**NURS 705,** Scientific Inquiry II .3
**NURS 715,** Advanced Nursing Practice: Roles and Issues .3
**HS 711,** Pharmacological Management of Acute and Chronic Diseases .3
**NURS 781,** Pathophysiology for Acute and Critical Care .3
**NURS 805,** Health Promotion through the Life Span .3
**NURS 808,** Advanced Role Practicum .3
**NURS 834,** Adult Nursing Practicum .3
**NURS 839,** Management of Acute and Chronic Health Problems of the Adults .3
**NURS 851,** Clinical Management* .3
**NURS 852,** Adult Nursing Practicum II .3
Elective courses, Thesis or Project .3-6

**NURS 801,** Management of Acute and Critical Care .3
**NURS 805,** Advanced Nursing Practice: Roles and Issues .3
**NURS 834,** Adult Nursing Practicum I .3
**NURS 839,** Management of Acute and Chronic Health Problems of the Adults .3
**NURS 851,** Clinical Management .3
**NURS 852,** Adult Nursing Practicum II .3
Elective courses, Thesis or Project .3-6

**NURS 803,** Health Promotion throughout the Life Span .3
**NURS 804,** Primary Care I: Practicum .4
**NURS 805,** Health Promotion through the Life Span .3
**NURS 809,** PC II: Management of Complex Health Problems .3
**NURS 810,** Primary Care II: Practicum .4
**NURS 849,** Nurse Practitioner Preceptorship .6

**Pediatrics (39-42 hours)**
**NURS 701/702,** Advanced Health Assessment /Lab .2/1
**NURS 703,** Scientific Inquiry I .3
**NURS 705,** Scientific Inquiry II .3
**NURS 715,** Advanced Nursing Practice: Roles and Issues .3
**NURS 781,** Pathophysiology for Acute and Critical Care .3
**NURS 805,** Advanced Role Practicum .3
**NURS 829,** Health Care during Growth and Development of Children and Families .3
**NURS 832,** Pediatric and/or Women's Health Nursing: Practicum .3
**NURS 836,** Pediatric and/or Women's Health Nursing: Practicum II .3
**NURS 851,** Clinical Management* .3
Elective courses, Thesis or Project .3-6

**NURS 803,** Health Care during Growth and Development of Children and Families .3
**NURS 805,** Advanced Nursing Practice: Roles and Issues .3
**NURS 834,** Adult Nursing Practicum I .3
**NURS 839,** Management of Acute and Chronic Health Problems of the Adults .3
**NURS 851,** Clinical Management .3
**NURS 852,** Adult Nursing Practicum II .3
**NURS 855,** Management of the Acute and Critically Ill Adult .3
**NURS 849,** Nurse Practitioner Preceptorship .6

**Family (45 hours)**
**NURS 701/702,** Advanced Health Assessment /Lab .2/1
**NURS 703,** Scientific Inquiry I .3
**NURS 705,** Scientific Inquiry II .3
**NURS 715,** Advanced Nursing Practice: Roles and Issues .3
**NURS 781,** Pathophysiology for Acute and Critical Care .3
**NURS 805,** Advanced Role Practicum .3
**NURS 834,** Adult Nursing Practicum I .3
**NURS 839,** Management of Acute and Chronic Health Problems of the Adults .3
**NURS 851,** Clinical Management .3
**NURS 852,** Adult Nursing Practicum II .3
Elective courses, Thesis or Project .3-6

**NURS 803,** PC I: Management of Common Health Problems .3
**NURS 804,** Primary Care I: Practicum .4
**NURS 805,** Health Promotion through the Life Span .3
**NURS 809,** PC II: Management of Complex Health Problems .3
**NURS 810,** Primary Care II: Practicum .4
**NURS 849,** Nurse Practitioner Preceptorship .6
**NURS 851,** Clinical Management .3

**Pediatrics (46 hours)**
**NURS 701/702,** Advanced Health Assessment /Lab .2/1
**NURS 703,** Scientific Inquiry I .3
**NURS 705,** Scientific Inquiry II .3
**NURS 715,** Advanced Nursing Practice: Roles and Issues .3
**NURS 781,** Pathophysiology for Acute and Critical Care .3
**NURS 805,** Advanced Role Practicum .3
**NURS 829,** Health Care during Growth and Development of Children and Families .3
**NURS 832,** Pediatric and/or Women's Health Nursing: Practicum .3
**NURS 836,** Pediatric and/or Women's Health Nursing: Practicum II .3
**NURS 851,** Clinical Management* .3
Elective courses, Thesis or Project .3-6

* NURS 851 is not required of those completing the thesis option.
Nursing and Health Care Systems Administration (42 hours)

NURS 703, Scientific Inquiry I ........................................... 3
NURS 705, Scientific Inquiry II ..................................... 3
NURS 715, Advanced Nursing Practice: Roles and Issues ......................... 3
NURS 775, Health Care Information Systems .................. 3
NURS 811, Foundations of Nursing & Health Care System Administration .......... 3
NURS 812, Nursing & Health Care System Administration Practicum ......... 6
NURS 827, Resource Management in Nursing .................... 3
NURS 851*, Clinical Management .................................. 3
NURS 863, Capstone Seminar ......................................... 3
NURS 812 (Administration), NURS 814 (Education) or NURS 776 (Informatics) 3
PHS 834, Financing Health Care Services 3
PHS 848, Concepts of Quality ...................................... 3
Elective courses, Thesis or Project .................................. 3-6

* NURS 851 is not required for students completing the thesis option.

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 applicants' grade point averages on academic work completed, and to their test scores 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 1,100 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.

Curriculum Plan

Master of Science in Nursing portion ....................... 30 hours

Core Curriculum

NURS 531, Nursing and Computer Technology .......... 3
NURS 703, Scientific Inquiry I ........................................... 3
NURS 705, Scientific Inquiry II ..................................... 3
NURS 715, Advanced Nursing Practice: Roles and Issues ......................... 3
NURS 851*, Clinical Management .................................. 3

Specialization Courses

NURS 775, Health Care Information Systems .................. 3
NURS 811, Foundations of Nursing & Health Care System Administration .......... 3
NURS 812, Nursing & Health Care System Administration Practicum ......... 6
NURS 827, Resource Management in Nursing .................... 3
PHS 834, Financing Health Care Services 3

Master of Business Administration portion .......... 33 hours

Prerequisites (not included in degree hours)

MATH 111, College Algebra ...................................... 3
MATH 144, Business Calculus .................................... 3
CESP 704, Introduction to Educational Statistics (or equivalent) ................. 3

Required Courses

MKT 801, Marketing Management .................................. 3
MBA 800, Financial Statement Analysis ...................... 3
ECON 800, Analysis of Economic Theory .................... 3
MIS 874, Management Information Systems ............. 3
MBA 801, Management and Marketing ................. 3

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 option in the graduate nursing program. Those requesting a clinical program must have a degree with a clinical emphasis. The following options will have prerequisites which must be fulfilled prior to acceptance.

Acute Care Nurse Practitioner Graduate Certificate ........................................... 15 hours

Course and experience prerequisites may be required. Please contact department for prerequisites.

NURS 839, Management of Acute and Chronic Health Problems of the Adult ....... 3
NURS 852, Adult Nursing Practicum II ......................... 3
NURS 855, Management of the Acute and Critically III Adult ......................... 3
NURS 849, Nurse Practitioner Preceptorship .................. 6

Nursing and Health Care Systems Administration Graduate Certificate ............. 15 hours
Course and experience prerequisites may be required. Please contact department for prerequisites.

NURS 701 & 702, Advanced Health Assessment & Lab

NURS 731, Psychopharmacology

NURS 793, Advanced Psychophysiology

NURS 805, Health Promotion through the Life Span

NURS 849, Nurse Practitioner Preceptorship

**MASTER OF SCIENCE IN NURSING DEGREE FOR ARNPs**

An MSN degree in two Nurse Practitioner (NP) options is offered for those who hold current ARNP certification in the appropriate option.

The degree for ARNPs is offered in the following options: 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 option in which the degree is sought.
- Minimum GPA of 3.00 in undergraduate work
- A college level health assessment course held by a pre or corequisite
- An approved statistics course as a Pre or Corequisite
- Transcript or certification of completion of NP training
- Current ARNP certification in state of residence

**Scholarship requirement** (Choose one.)

1. NURS 821, Thesis
2. NURS 823, Scholarly Project
3. NURS 851, Clinical Management

* Suggested electives are listed at the end of this section.

**NURS 808, Advanced Role Practicum**

NURS 805, Health Promotion through the Life Span

NURS 823, Scholarly Project

NURS 851, Clinical Management

* The suggested electives for the MSN Degree for ARNPs are dependent on the option chosen. Some electives are: NURS 531 Nursing and Computer Technology, NURS 720 Human Lactation (online), NURS 728 Common Dermatologic Problems in Primary Care (online), NURS 727 Acute Low Back Pain (online), NURS 733 Diabetes Mellitus (online), NURS 775 Health Care Information Systems, NURS 723 Foundations of Nursing Education.

**Courses for Graduate/Undergraduate Credit**

NURS 501. 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. Course examines the cultural influences on health and illness in a variety of groups, emphasizing developing more sensitive and effective nursing care. Prerequisites: 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, dis-
ability and disfigurement, chronic illness, dying, and death. Includes grief and mourning. Open to non-nursing majors.

NURS 331. 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 SC WK 566. Provides an interactive format that constitutes a community resource for health and 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 illnesses, eating disorders, bereavement, mental illness, and parenting.

NURS 701. Advanced Health Assessment (2). Designed to assist students to refine history-taking, psychosocial assessment, and physical assessment skills. Focuses on assessment of individuals throughout the life span. Emphasizes detailed health history-taking, differentiation, interpretation, and documentation of normal and abnormal findings. Includes lecture, discussion and demonstration of history-taking, and an integrated physical assessment. 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 history and physical 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. Scientific Inquiry I (3). Emphasizes the role of theory in scientific inquiry in nursing. Traces the evolution of nursing theory and explores projections for the future. Addresses relationships among theory, research, and practice. Analyzes selected models/frameworks relevant for nursing. 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. Prerequisite: 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 708. School Nurse Practicum (2). An intensive clinical experience; students analyze, design, implement, and evaluate nursing systems to promote the health of individuals in the school-health delivery system and the broader community system. Open to RN and graduate students.

NURS 715. Advanced Nursing Practice: Roles and Issues (3). Designed for students preparing for advanced practice. Discusses historical development of advanced practice role; the ethical, legal, political, and economic issues of such a role; and current trends and future directions. Focuses on issues ranging from concerns within the local practice setting to national policy issues related to advanced nursing practice. Prerequisite: admission to graduate nursing program.

NURS 718. Advanced Technologies (2). Focuses on application of clinical skills and interpretation of technologies utilized 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 options 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 724. Nursing Education Practicum (3 or 6). Student, under professional guidance becomes directly involved in clinical and classroom teaching, curriculum development and participation in other faculty functions in higher education and continuing education. A seminar accompanies the field experience. Prerequisites: departmental consent and 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 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. Clinical Teaching Strategies (3). Explores alternative teaching strategies for the clinical educator to accommodate the changing health care scene. Discusses clinical teaching methods. A clinical rotation plan with accompanying clinical evaluation tool is constructed after the student, subject, and setting are delineated. Investigates roles of the educator in teaching clinically.

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 or Corequisite: 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 applications 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 options.

NURS 791. Special Studies in Nursing (1-6).
Opportunity for directed 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 (3).
Explores in-depth scientific knowledge base relevant to selected pathophysiological states confronted in primary care. This 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. Prerequisites: admission to graduate nursing program and departmental consent.

NURS 795. Applied Drug Therapy (3).
Discusses the clinical application of specific categories of drugs commonly encountered in primary care settings. Explains the use of protocols, prescription writing, and the ethical/legal and economic issues surrounding the advanced nurses' role in prescribing and monitoring pharmacologic therapies in the ambulatory setting. Discusses factors such as gender 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 department consent.

NURS 796. Nursing Practicum in Special Setting (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).
Student engages in critical search of the literature in areas related to the profession and practice of nursing. Prerequisites: departmental consent.

Courses for Graduate Students Only

NURS 803. Primary Care I: Management of Common Health Problems through the Life Span (3).
Focuses on common health 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 common problems in urban and rural patients, interventions to restore individual and family levels of pre-illness health, and positive behaviors. Prerequisites: all core courses, NURS 718, 786 and admission to the FNP option. Pre- or Corequisite: NURS 715, 793 and 795. Corequisite: NURS 804.

NURS 804. Primary Care I: Practicum (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. Prerequisite: admission to the FNP option. Corequisite: NURS 803.

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 provide an understanding of health and lifestyle behaviors. Prerequisite: NURS 703. Pre- or Corequisite: NURS 705.

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 795 or HS 711, pathophysiology (NURS 781, 783 or 793) and all other clinical courses in the specialty option.

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 803, 804 and admission to the FNP option. Corequisite: NURS 810.

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 option. Corequisite: NURS 809.

NURS 811. Foundations of Nursing and Health Care Systems Administration (3).
The course assists the student in acquiring theoretical knowledge of organizations. Considers current issues and research in nursing and health care systems and its impact on nursing practice. Prerequisites: 703 and 705. Pre- or Corequisite: NURS 715.

NURS 812. Nursing and Health Care Systems Administration Practicum (1-6).
This is a practicum in a health care setting; students, under professional guidance, become directly involved in existing leadership, administrative and management systems. A seminar (recitation) accompanies the field experience. Types of experience may include roles in nursing education or service, mid-level nursing administration, staff development, community health or other related area as arranged. Repeatable for credit with instructor consent up to a maximum of 6 hours. Pre- or Corequisite: NURS 811 or 827.

NURS 819. Foundations of Psychiatric Mental Health Nursing (3).
Evaluates major theories, clinical concepts and current research in psychiatric/mental health in relation to formulating a conceptual model for nursing practice. Prerequisites: NURS 701, 702, 703 and 705. Pre- or Corequisite: NURS 715.

NURS 821. Thesis (1-6).
Graded S/U only. The student, in conjunction with the academic advisor and a three-member thesis committee, designs and conducts a formal research project. Prerequisites: admission to graduate nursing program and departmental consent.

NURS 822. Psychiatric/Mental Health Nursing Practicum I (3).
Intensive clinical experience; the student plans, implements and evaluates nurse-therapist strategies with individual clients/patients. A seminar accompanies the practicum. Prerequisite or Corequisite: NURS 819.

NURS 823. Graduate Project: Alternative to Thesis (1-3).
Graded S/U only. 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 other type project developed in conjunction with the stu-
NURS 825. Independent Study (1-6). Provides opportunity for the student to develop, in collaboration with a school faculty member, objectives and protocol for independent work related to the practice of nursing. Prerequisites: admission to graduate nursing program and departmental consent.

NURS 827. Resource Management in Nursing (3). Focuses on the assessment and management resources necessary to operate nursing and health care systems including: information systems needed to manage resources; budget process management; personnel management from recruitment through termination, including staffing and scheduling; and management of relationships with patients, physicians, and diverse departments with different philosophies and views. Prerequisites: NURS 703 and 705. Pre- or Corequisite: NURS 715.

NURS 832. Pediatric and/or Women's Health Nursing: Practicum I (3). An intensive clinical experience; the student focuses on the process of systematic developmental, psychosocial and health assessment of individuals within a family system. Experiences based on the student's clinical interests. Prerequisite: all core courses. Pre- or Corequisite: NURS 829.

NURS 834. Adult Nursing Practicum I (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: all core courses, NURS 781, NURS 805 and HS 711. Pre- or Corequisite: NURS 839.

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 and NURS 805. Pre- or Corequisite: NURS 853.

NURS 839. Management of Acute and Chronic Health Problems of the Adult (3). This course 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 781, NURS 805 and HS 711.


NURS 847. Pediatric Primary Care I: Management of Common Health Issues (3). Focuses on comprehensive assessment, diagnosis, and management of health and common health problems seen in children and families during the infant, childhood, and adolescent years. Stresses applications of current 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 children’s and family’s levels of pre-illness health, and positive behaviors. Prerequisites: NURS 701, 702, 703, 705, 718, 786, 829 and admission to the PNP option. Pre- or Corequisites: NURS 715, 793 and 805.

NURS 848. Pediatric Primary Care I Practicum: Clinical Management of Common Health Issues (3). Concentrated clinical practicum in a primary care setting that addresses individuals and families during the infant, childhood, and adolescent age span, within the context of the community. Emphasizes history taking; cultural, developmental, nutritional, and physical assessment; and documentation skills. Seminars focus on analysis and evaluation of clinical situations. Prerequisites: admission to the PNP option. Prerequisite or Corequisite: NURS 847.

NURS 849. Nurse Practitioner Preceptorship (3 or 6). A concentrated clinical practicum in an acute or primary 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: departmental consent and admission to one of the NP options.

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. Prerequisites: all core courses. Prerequisite or Corequisite: enrollment in a course within the student’s clinical or administration option. Computer literacy is expected.

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. Prerequisite: NURS 854

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 805, 834, 839, 852, admission to the ACNP option and departmental consent.

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 selected 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. 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 and interventions to restore children’s and family levels of pre-illness health, including secondary and tertiary prevention. Prerequisites: NURS 847 and 848.


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. Utilizes a seminar approach with case studies, student presentations, and presentations by executives and other experts from the community. Prerequisites: NURS 703, 705, 715, 775, 811, 812 (3 hours), 827, PHS 848 and either 834 or 442. Pre- or Corequisites: NURS 812 (3 hours) and 851.
Fairmount College of Liberal Arts and Sciences

Department and Program Contacts

Anthropology, (316) 978-3195—Peer Moore-Jansen, chairperson; Keith Prufer, graduate coordinator

Biological Sciences, (316) 978-3111—David McDonald, chairperson; William Hendry III, graduate coordinator

Chemistry, (316) 978-3120—Dennis Burns, chairperson; William T.K. Stevenson, graduate coordinator

Communication, Elliott School of, (316) 978-5185—Susan S. Huxman, director; Patricia Dooley, graduate coordinator

Community Affairs, School of, (316) 978-7200—Paul Cromwell, director

Criminal Justice, (316) 978-5896—Michael Birzer, graduate coordinator

Ethnic Studies, (316) 978-6546—Anna Chandler, program director

Gerontology, (316) 978-6684—Mary Corrigan, graduate coordinator

Computer Science, (316) 978-3156—Rajiv Bagai, chairperson; Rodney Bates, graduate coordinator

Earth, Environment and Physical Sciences, (316) 978-3140—Wan Yang, graduate coordinator

English, (316) 978-3130—Margaret Dawe, chairperson; Christopher Brooks, graduate coordinator

Geology, (316) 978-3140—John Gries, chairperson; Wan Yang, graduate coordinator

History, (316) 978-3150—Judith Johnson, chairperson; John Dreifort, graduate coordinator

Liberal Studies, (316) 978-3358—David Soles, graduate coordinator

Mathematics, (316) 978-3160—Buma L. Fridman, chairperson; Kenneth Miller, graduate coordinator

Modern and Classical Languages and Literatures, (316) 978-3180—Eunice Myers, chairperson; Maria Akrabova, graduate coordinator

Philosophy, (316) 978-3125—David Soles, chairperson

Physics, (316) 978-3190—Elizabeth Behrman, chairperson; Hussein Hamdeh, graduate coordinator

Political Science, (316) 978-3165—David Ericson, chairperson

Psychology, (316) 978-3170—Charles Burdol, chairperson; Robert Zettle, graduate coordinator

Religion, (316) 978-3108—Stuart Lasine, director

Social Work, School of, (316) 978-7250—Linnea GlenMaye, director & graduate coordinator

Sociology, (316) 978-3280—Ron Matson, chairperson; David Wright, graduate coordinator

Urban and Public Affairs, Hugo Wall School of, (316) 978-7240—Ed Flentje, director

Public Administration, (316) 978-6693—Samuel Yeager, graduate coordinator

Urban Studies, Center for, (316) 978-7240—Ed Flentje, director

Women’s Studies, (316) 978-3358—Ramona Liera-Schwichtenberg, chairperson

Graduate Certificate Contacts

Applied Communication, (316) 978-6059—Patricia Dooley, graduate coordinator

Economic Development, (316) 978-6693—Sam Yeager, graduate coordinator

Great Plains Studies, (316) 978-6764—Diane Quantic, program coordinator

Public Finance, (316) 978-6332—Sam Yeager, graduate coordinator

Anthropology (ANTH)

Graduate Faculty

Professors: Dorothy Billings, Donald Blakeslee, Robert Lawless, Clayton A. Robarchek

Associate Professors: David Hughes, Peer Moore-Jansen (chairperson), Jacqueline Snyder

Assistant Professor: Keith Prufer (graduate coordinator)

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 semester 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 advisor.

Applicants will be notified of the faculty’s decision by March 15 for fall admission or November 15 for spring admission.

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 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 “Independent 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 ANTH 837 “Seminar in Cultural Anthropology,” graduate students must have taken 5 hours of graduate coursework in anthropology including ANTH 746 “Advanced Studies in Cultural Anthropology.” To enroll in ANTH 820 “Seminar in Biological Anthropology,” graduate students must have taken 5 hours of graduate coursework in anthropology including ANTH 756 “Advanced Studies in Biological Anthropology.” To enroll in ANTH 801 “Seminar in Archaeology,” graduate students must have taken 5 hours of graduate coursework in anthropology including ANTH 736 “Advanced Studies in Archaeology and Ethnobiology.” 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.

The MA degree in anthropology has three tracks.

Track 1 requires the completion of 30 semester hours, including the presentation of a thesis and comprehensive exams. At least 60 percent (18) of these hours must be in courses numbered 700 or above. The 30 hours must include a core course in archaeological anthropology (ANTH 736), cultural anthropology (ANTH 746), biological anthropology (ANTH 756), and two seminars.

Track 2 requires the completion of 33 semester hours, including the three core courses (ANTH 736, 746, and 756), two seminars, and the presentation of a thesis or approved project.

Track 3 requires the completion of 36 semester hours, at least 21 in anthropology including ANTH 736, 746, and 756, and two seminars. At least 12 from/in (an) other discipline(s) are also required. Either an examination or an internship is also required.

A total of 4 hours of thesis, project, or internship, to complete the 30, 33, or 36 semester hours requirements for each track shall include either 2 hours each of ANTH 871 and 872 (internship), ANTH 873 and 874 (project), or ANTH 875 and 876 (thesis). 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. The committee approves proposals for and an oral defense of all theses, projects, and internships. Comprehensive exams are graded by all full-time teaching faculty in the department. 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 comprehensive examination and students in Track 3 may take it in consultation with their MA committee. The comprehensive examination is not required for students in Track 2. Students must have completed a minimum of 15 semester hours of graduate work in anthropology, including ANTH 736, ANTH 746, and ANTH 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 the 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 502. Introduction to Archaeological Laboratory Techniques (1-3). Maximum of 3 hours. An introduction to the laboratory processing of archaeology materials. Direct experience in all phases of preparing excavated materials for analysis, including cleaning, restoring, preserving, numbering, and cataloging of ceramic and lithic artifacts and other remains. Prerequisite: ANTH 305.

ANTH 506. Peoples of the Pacific (3). General education further study course. A survey of the races, languages, and cultures of non-literate peoples of Polynesia, Micronesia, and Indonesia.

ANTH 508. Ancient Civilizations of the Americas (3). General education further study course. A cultural survey of the Aztec, Maya, and Inca. Prerequisite: instructor’s consent.

ANTH 511. The Indians of North America (3). General education further study course. A survey of tribal societies and native confederations north of Mexico from the protohistoric through the historic period. Prerequisite: ANTH 102.

ANTH 515. China (3). General education further study course. 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). General education further study course. 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). General education further study course. 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 526. 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). General education further study course. 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 105.

ANTH 542. Women in Other Cultures (3). 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 Paleontology (3). A detailed examination of human evolutionary history as evidenced by fossil remains and a survey of various interpretative explanations of the fossil record. Prerequisite: ANTH 101 or BIOL 203 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 systems. 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. Prerequisites: ANTH 101, 106, 356, or 557.

ANTH 611. Southwestern Archaeology (3). General education further study course. 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 prehistoric to the present. Prerequisites: 6 hours of anthropology and departmental consent.

ANTH 613. Archaeology of the Great Plains (3). General education further study course. 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 anthropological studies; 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 Archeology and Ethnohistory), ANTH 746 (Advanced Studies in Cultural Anthropology), and ANTH 756 (Advanced Studies in Biological Anthropology). Repeatable up to six hours. Prerequisites: Full graduate standing, completion of one core course (ANTH 736, ANTH 746, or ANTH 756), and department 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 Cr/NCr only. 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, ANTH 746, or ANTH 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 interview 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 (1-2). S/U grade only. Repeatable for a maximum of 3 hours. 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. Students presenting colloquium papers receive 2 credits. 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 (2-2). Students following applied or multidisciplinary tracks, such as museology, 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 need not require a tangible end product (e.g., paper, thesaurus, and/or visual production or exhibit). May be repeated, but limited to a total of 4 credit hours. Prerequisite: committee consent.

ANTH 873-874. Advanced Project in Anthropology (2-2). In consultation with their major advisor 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, thesaurus, and/or visual production or exhibit). May be repeated, but limited to a total of 4 credit hours. Prerequisites: committee consent.

ANTH 875-876. Thesis (2-2).

Biological Sciences (BIOL)

Graduate Faculty

Professors: William J. Hendry III (graduate coordinator), Wendell W. Leavitt, David McDonald (chairperson)

Associate Professors: George R. Bousfield, Jeffrey V. May, J. Karen L. Brown Sullivan

Assistant Professors: Christopher M. Rogers, Leland Russell, Mark A. Schneegurt, 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 under either the research thesis option or nonthesis option. 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 advisor after which they choose a permanent graduate advisor and committee. The advisors 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 semester hours in biological sciences and 15 semester hours in chemistry; (2) an overall grade point average of at least 2.750 (4.000 scale) for the most recent 60 semester 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) TOEFL 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 nondegree 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 selecting the research thesis option must complete 30 credit hours of graduate work, including the presentation and oral defense of a thesis based on original research. In addition, all students in the
research thesis option must demonstrate proficiency in at least one research tool, such as knowledge of a modern foreign language or completion of acceptable course work in statistics or computer applications. Graduates who select this option often move on to advanced research degrees or careers in research science.

Candidates selecting the nonthesis option must complete 36 credit hours of graduate work and successfully pass comprehensive exams in two areas of biology. The nonthesis option is designed for, but not limited to, students employed in professional areas such as the medical community and secondary education who wish to expand or update their knowledge of biology.

Nonmajor Courses
(May not be used to satisfy the requirements for the major)

Courses for Graduate/Undergraduate Credit

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 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 biological sciences that satisfies general education requirements.

Major Courses
(Used to satisfy the requirements for the major)

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. Prerequisite: 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 and Chautauqua Hills provide an opportunity to collect specimens and to observe ecology and distribution of native species of flowering plants. Prerequisite: BIOL 204 or 211 and CHEM 212 or instructor’s consent.

BIOL 523. Freshwater Invertebrates (4). 2R; 4L.
Emphasizes the ecology, taxonomy, and form and function of free-living, freshwater invertebrates. Half of the course deals with arthropods. 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 a more extensive collection within a given taxon. Prerequisites: BIOL 211 and CHEM 212.

BIOL 524. Vertebrate Zoology (4). 2R; 4L.
Evolution, distribution, systematics, 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 instructor. Prerequisites: BIOL 204 or 211 and CHEM 212. BIOL 527 is also recommended.

BIOL 526. 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.
A study of 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 532. Entomology (4). 2R; 4L.
An examination of the systematic significance of insects. Students earning graduate credit submit a term paper based on the technical literature on a topic chosen in consultation with the instructor or develop proficiency in a specific taxon by performing an individual systematic project. Prerequisites: BIOL 204 or 111 and CHEM 212.

BIOL 534. Mammalian Physiology (3).
An organ systems approach to mammalian—primarily 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 mammalian physiology chosen in consultation with the instructor. Prerequisites: BIOL 204 or 211 and CHEM 531, or instructor’s consent.

BIOL 535. Mammalian Physiology Laboratory (2). 4L.
An empirical approach to mammalian 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 or Corequisite: 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; 4L.
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 thirty-minute lecture over one of the topics covered in this course. Prerequisites: BIOL 418 and CHEM 212 or instructor’s consent.

BIOL 570. 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.

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, CHEM 212, and instructor's consent.

BIOL 610. Topics in Botany (3-4). Selected offerings in botany. Consult the Schedule of Courses for current offerings(s). 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. Prerequisites: BIOL 204 or 211, CHEM 212, or 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. Prerequisite: BIOL 420. BIOL 526 is strongly recommended.

BIOL 630. Behavioral Ecology (3). A study of 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 current offerings(s). 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. Prerequisite: BIOL 418.

BIOL 660. Topics in Microbiology (2-4). 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. S/U grade only. 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. 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 prepare 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 will be covered by discussing the control of normal and abnormal cell growth in several model systems. Students earning graduate credit will 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 and 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 525 or equivalent and CHEM 531 or equivalent, or 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 growth hormone, luteinizing hormone, follicle-stimulating hormone, chorionic gonadotropin, thyroid-stimulating hormone, steroid hormones, thyroid hormone, activin/inhibin, prostates, 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 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 or 584.

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). S/U grade only. Students performing research on their thesis projects 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.

BIOL 891. Thesis (2). S/U grade only. Students must be enrolled in this course during the semester in which the thesis is defended.
Chemistry (CHEM)
Graduate Faculty
Associate Professor: David M. Eichhorn, Michael J. Van Stipdonk
Assistant Professors: James G. Barn

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 and 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 3.00/4.00 (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. Applicants whose transcripts do not include test scores are recommended to submit scores from the TOEFL with a minimum score of 550 paper-based, 213 computer-based, or 79 Internet-based. These criteria are guidelines and do not guarantee admission.

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, physical, 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 990. Also, at least 15 credit hours in chemistry courses numbered above 701 must be taken, including at least one course from four of the following six areas: analytical chemistry, inorganic chemistry, organic chemistry, physical chemistry, biochemistry, and polymer chemistry. Students must successfully complete CHEM 700 once, and full-time students must register each semester in CHEM 701. Additional courses, which may be outside the major field, are selected by students in consultation with their advisor and the department’s advising committee. The 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.

Doctor of Philosophy Requirements
All PhD students are required to take 24 course hours, of which 12 must be in the area of major interest, and 9 of the remaining 12 must be from two of the other five areas. The courses must be numbered higher than 701. Students are required to begin cumulative examinations at the beginning of their second year. Students must pass six cumulative examinations out of 16 attempts to remain in the program. During their fifth semester, students are expected to develop and orally defend an original research proposal. Two enrollments in departmental seminar (CHEM 700) and continuous enrollment in departmental colloquia (CHEM 701) are required. 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 advisor 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). General education further study course. Basic inorganic chemistry emphasizing molecular symmetry and structure, fundamental bonding concepts, ionic interactions, periodicity of the elements, systematics 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 C or better.
> CHEM 523. Analytical Chemistry (4). 3R; 6L. Lab fee. General education further study course. Evaluation of data, theory and application of gravimetric analysis and precipitation, neutralization, and oxidation-reduction volumetric analysis. Prerequisite: CHEM 212 with a C or better.

CHEM 524. Instrumental Methods of Chemical Analysis (4). 3R; 6L. Lab fee. Introduction to electroanalytical chemistry and optical method of analysis and separation of complex mixtures, both inorganic and organic. Also discusses basic computer programming as it applies to analytical chemistry. Prerequisite: CHEM 523.

CHEM 531. Organic Chemistry I (5). 3R; 6L. Lab fee. General education further study course. An introduction to the study of carbon compounds emphasizing reaction mechanisms, stereochemistry, and spectrographic analysis. Prerequisite: CHEM 212 with a C or better.

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. Prerequisite: CHEM 531 with a grade of C or better.

CHEM 546. Physical Chemistry I (3). General education further study course. Kinetic theory, kinetics, transport phenomena, quantum theory, spectroscopy, and statistical thermodynamics. Prerequisites: CHEM 212 with a grade of C or better, one year of college physics, and MATH 344 or its equivalent.

CHEM 547. Physical Chemistry Laboratory (2). 6L. Lab fee. Physical chemistry experiments that illustrate principles learned in CHEM 546 and 548. Prerequisite or Corequisite: CHEM 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 adsorbents (clays, zeolites, 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. Prerequisite 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. Course 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. Prerequisites: 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. Prerequisite or Corequisite: CHEM 615.

>CHEM 661. Introductory Biochemistry (3). General education further study course. An introductory course for chemistry majors including chemistry/business majors and students in life sciences. Not recommended for the BS in chemistry for health sciences 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.

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, phosphoglycogen, spinogolipids, 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. Should be taken concurrently with CHEM 662 or CHEM 663. Prerequisite: CHEM 532 or equivalent.

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. S/U grade only. 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. 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). S/U grade only. Students give seminars on either papers recently published in the literature or on their own research. Repeatable for credit.

CHEM 701. Chemistry Colloquium (1). S/U grade only. Speakers for the colloquium consist of outstanding chemists from other institutions and faculty. Repeatable for credit.

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 (3-4). 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 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). A discussion of topics of a special significance and interest to faculty and students. Offering 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 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 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, IR and Raman spectra; thermochemical properties, heat of formation, bond and reaction energies, ionization energy barriers; reaction pathways; molecular orbitals, atomic charges, dipole and multipole moments, ionization potentials, bond orders; orbital energies and photoelectron spectroscopy; excited state properties, singlet and triplet surfaces. Prerequisite: CHEM 546 or equivalent (MATH 344 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 Ziegler Natta and group transfer polymerization. Prerequisites: CHEM 531 and 548.

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 548.

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. Bioinorganic 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 (electrochemical 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, or 662 and concurrent enrollment in 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 548 or equivalent.

CHEM 843. Statistical Thermodynamics (3). Develops Boltzmann, Fermi-Dirac, and Bose-Einstein statistical mechanics with applications to gaseous-state and solid-state chemical problems. Emphasizes the relationship of statistical mechanics and thermodynamics. Considers applications of statistical thermodynamics to polymers. Prerequisites: CHEM 548 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, time dependent mechanical behavior of polymers, and the Maxwell and Voigt models of viscoelasticity. The Boltzman 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). SU grade only. Research for the student planning to receive an MS. Research is directed by a faculty member. Repeatable for credit.

CHEM 990. Research in Chemistry (2-16). SU grade only. Research for the student planning to receive the PhD. Research is directed by a faculty member. Repeatable for credit.

Communication, Elliott School of (COMM) Graduate Faculty

Professors: Philip Gaunt (director, Interdisciplinary Communication Research Institute), Sharon H. Iorio (associate dean, Fairmount College of Liberal Arts and Sciences)

Associate Professors: Les Anderson (associate director), Richard Armstrong, Dan Close, Patricia Doolley (graduate coordinator), Kevin Hager, Susan S. Huxman (director, Elliott School), Keith Williamson

Assistant Professors: Mike Boyle, Jeff Jarman, Amy-Mattson Lauters, Greg Stene, 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 course work, must submit results of the Graduate Record Exam, and must write a statement of purpose for pursuing the Master of Arts in Communication. Internationa students must score at least 600 paper-based, 250 computer-based, or 100 Internet-based on the TOEFL 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 course work—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.

Program Core (Required) Courses

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 865, Organizational Communication ........................................3
**Other Courses.** In addition to the required courses, students, with the advice and consent of their faculty advisor, must select courses to complete the Plan of Study, as discussed in the Graduate School section 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 course work 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 course work are chosen from a group of elective courses in speaking, writing, and visual communication. An applicant for the program must meet WSU Graduate School 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**

** Komm 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.

** Komm 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.

** Komm 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.

** Komm 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 of organizational, interpersonal, small group, public and contemporary topics and issues. Prerequisite: COMM 130 or instructor's consent.

** Komm 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.

** Komm 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.

** Komm 550. Opinion Writing (3).** Studies editorial judgment, including practice in the writing of print, broadcast, and electronic opinion pieces, and the examination of traditional and new technology research materials available to opinion writers. Prerequisites: COMM 301 with a C or better and junior standing.

** Komm 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.

** Komm 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.

** Komm 604. Video Storytelling (3).** Application of video equipment and techniques for field productions. Execution of visual and audio expression in relation to video productions in a field setting. Prerequisite: COMM 304 or instructor's consent.

** Komm 609. Interactive Media Production (3).** Investigation and application of production techniques for educational and instructional broadcasting, emphasizing television. Prerequisite: COMM 304.

** Komm 612. Scholastic Journalism Instructional Strategies (3).** Assists those who are preparing to advise and teach 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.

** Komm 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 advisor’s consent. Prerequisite: COMM 422 or instructor’s consent.

** Komm 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.

** Komm 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, 555, 630, 631; and departmental consent.

** Komm 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.

** Komm 636. Advanced Public Speaking (3).** Skills development in a variety of advanced presentational methods, including speaking from a TelePrompTer, using PowerPoint technology, spokesperson/press conference speaking, conducting a training session, formal manuscript speaking, after dinner speaking, and writing a speech for another person. Prerequisite: COMM 525.

** Komm 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.

** Komm 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.

** Komm 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.

** Komm 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). Individual study or projects. Repeatable for credit with departmental consent. Prerequisite: departmental consent.

COMM 690. Communication Internship (1-2). Cross listed as THEA 675. Credit for professional experience that integrates theory with a planned and supervised professional experience designed to complement and enhance 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 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 the 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.

COMM 875-876. Thesis (1-3-1-3). Prerequisite: departmental consent.

Community Affairs, School of

The School of Community Affairs, created in 1999, brings together the programs of criminal justice, ethnic studies, and gerontology to form a unique and diverse curriculum to better serve the needs of students to work in an ever-changing urban and global community. Additionally, the Midwest Criminal Justice Institute (MCJI) and the Regional Community Policing Training Institute (RCPTI) provide opportunities to blend teaching, research, and service. As a result, the School of Community Affairs not only serves as a quality educational unit for students, but also functions as a research and service unit that assists with a broader range of needs identified in the community.

Criminal Justice (CJ)

Graduate Faculty

Professors: Paul Cromwell (director, School of Community Affairs), Michael Palmiotto

Associate Professors: Andrea Bannister (director, RCPTI), Ronald G. Iacovetta, Delores Craig-Moreland, Martha Smith, Brian Withrow (director, MCJI, and the forensic science program)

Assistant Professor: Michael Birzer (graduate coordinator)

Master of Arts in Criminal Justice

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; (2) a brief autobiographical statement describing particular interests, experiences, and goals related to academic and professional work in criminal justice; and (3) scores on the Graduate Record Exam (GRE) verbal and quantitative.

Applicants are evaluated with respect to (1) undergraduate grade point average (a minimum GPA of 3.00 based on the last 60 hours required for consideration of admission to degree status); (2) amount, type, and scope of undergraduate preparation; (3) reference letters; and (4) GRE scores. 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

The MACJ degree requires a minimum of 36 hours, including 27 hours taken in courses numbered 700 or above.

Core Curriculum. All degree candidates are required to complete CJ 802, 893, 894, and 897. CJ 802 and 894 must be completed in the first semester of study with a B or better. CJ 802 is a prerequisite for 897. Candidates must pass a written comprehensive examination during their final semester.

Examinations

Students are required to pass a written comprehensive examination.
Courses for Graduate/Undergraduate Credit

CJ 501. Integrity in Public Service (3). Cross-listed as PADM 501. Explores the student to basic principles of personal and professional integrity and how these principles apply to their daily life as a member of the community and as an employee of a government or social service agency. Emphasizes 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). General education further studies course. 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. and will provide 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 will be required. Prerequisite: CJ 191.

CJ 515. Sex Crimes (3). Examines and defines what is classified as criminal forms of sexual behavior and the unique challenge they present to the criminal justice system. Also examines the extent and nature of sex crimes, sexual predator laws, sexual harassment, and the effects of such crimes. Also 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 will be 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). General education further studies course. Presents films and associated popular cultural materials related to the criminal justice system and crime. The genre of the film crime has become an important component of contemporary culture. The course begins with basics of film criticism and will provide students with instruction on elements of a film genre. American and European films will be 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 format in relevant criminal justice subjects. Repeatable for credit up to 6 hours.

>CJ 593. Crime Causation and Criminal Justice Policy (3). General education further study course. 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. Explores 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 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 toolmark 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 causation, typologies, communications, 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. Prerequisite: 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, 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 Cr/NC 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-level standing.

CJ 797. 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. Examines methodologies 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 Professionals (3). Cross-listed as GERO 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.

CJ 817. Crime in Popular Culture (3). Analyzes film as an expression of popular culture; focuses on films dealing with 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 and studies recurring issues regarding the interpretation 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 format 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. Emphasizes 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 coordination 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 survey and analysis of administrative philosophy, problems, procedures, organizations, and functions of effective agency organizations. Considers administrative skills related to operations and personnel.

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 justice process. Emphasizes the student's development of a consistent and valid frame of reference.

CJ 894. Proseminar in Criminal Justice (3). Familiarizes 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 on 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 settings, 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. Prerequisite: either CJ 802 or equivalent.

CJ 898. Applied Research Paper (3). Original research 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.

Ethnic Studies (ETHS)

Graduate Faculty

Assistant Professor: Anna M. Chandler

Although a graduate program is not currently available in ethnic studies, the Department of Ethnic Studies participates extensively with other departments in the multidisciplinary Master of Arts in Communications and Master of Arts in Liberal Studies. See requirements for these programs in the Elliott School of Communications and Master of Arts in Liberal Studies sections of the Graduate Catalog.

Courses for Graduate/Undergraduate Credit

>ETHS 512. Aging and Ethnicity (3). Cross-listed as GERO 512. General education further study course. 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 procedures 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.


ETHS 545. Cross-Cultural Communications Theory (3). An examination of current cross-cultural communication 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 Communications (3). A critical survey of the concepts of cross-cultural communications. An in-depth examination of the rationale used to evaluate different ethnic groups' language and behavior. Course provides a conceptual understanding of special implications and necessary adaptations of communications to, between, and among diverse ethnic groups in our society.

Gerontology (GERO)

Graduate Faculty

Professors: Raymond H. Hull, Communicative Disorders and Sciences; 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 Administration; Marilyn L. Turner, Psychology

Assistant Professors: Anna M. Chandler, Ruth B. Pickard, Public Health Science, Mary Corrigan, (graduate coordinator)

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 advisor. International students must have a score higher than 575 paper-based, 230 computer-based, or 88 Internet-based on the TOEFL exam.

Degree Requirements

Students must take certain required core courses with a minimum total of 39 hours including a terminal research project.

### Core Curriculum

- **GERO 518, Biology of Aging or NURS 789, Chronic Illness and Aging** 3
- **GERO 663, Economic Insecurity** 3
- **GERO 702, Research Methods** 3
- **GERO 715, Adult Development and Aging** 3
- **GERO 798, Multidisciplinary Perspectives on Aging** 3
- **GERO 802, Aging Programs and Policies** 3
- **GERO 810, Advanced Gerontology Internship** 3
- **GERO 850, Selected Topics in Gerontology** 3

Electives* 12

Terminal Research Project** (one of the following) 3
- GERO 898, Applied Research Paper or GERO 899, Thesis

Total 39

*GERO 810, Internship, may be waived for those with extensive approved practical experience.

**With the approval of their advisor, 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, 775, 802, 845, 865; NURS 789; ACCT 800; MKT 800; PHS 804, 812, 818, 822, 826, 834, 858; and PSY 813. With the consent of their graduate program advisor 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 knowledge and knowledge of the aging service network. Repeatable for 6 hours credit. Prerequisites: 12 hours of gerontology credit and instructor’s consent.

**GERO 512. Aging and Ethnicity** (3). Cross-listed as ETHS 512. General education further study course. 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 procedures 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 lifespan 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 human. 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, widowedhood, 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). Explores the impact of an aging population on social institutions, covers the history of American aging policies and the organization and financing of health care for the elderly, and compares public approaches to responding to the needs of an increasingly diverse aging population. 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 professional 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 government 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 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 utilizing 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. Utilizing an interactive, interdisciplinary perspective, the course examines the process of change, transition, growth, and development across the adult lifespan. Prerequisites: GERO 798 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. Prerequisite: 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** (1-6). Provides practical field experience, under academic supervision, that is suitable for graduate credit and complements and enhances the stu-
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 processes 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. Prerequisites: 12 hours of gerontology credit and instructor's consent prior to registration.

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. Prerequisite: CJ 802 or equivalent.

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. Prerequisite: graduate-level research methods class. Repeatable.

GERO 899. Thesis (1-3). Repeatable, but total credit hours counted toward degree shall not exceed 4 hours.

Computer Science (CS)
Graduate Faculty
Professor: Shang-Ching Chou
Associate Professors: Rajiv Bagai (chairperson), Prakash Ramanan
Assistant Professors: Rodney Bates (graduate coordinator), Sattiraju Prabakar

Master of Science
The Department of Computer Science offers the Master of Science (MS) degree program. Through a combination of advanced courses and electives, the MS program seeks to provide a level of concentration suitable for advanced professional work and/or further graduate study in computer science.

Admission Requirements
All candidates for graduate study must have a bachelor's degree (in any field) from an accredited institution. In addition, for MS degree status and for NonDegree A status, a candidate's GPA in the last 60 hours of course work should be at least 3.00. (A probationary admission can be granted to candidates with a GPA in the last 60 hours of course work between 2.600 and 3.00.) All international applicants must have a score of at least 550 on the TOEFL exam.

Required background courses: This consists of Math and CS courses.

a) Math courses: Two semesters of university level math at the level of Calculus I or above.

b) CS courses: A programming course, CS 300, 321, 322, 411, 510, 540, 560.

In addition to the graduate school requirements for admission, the applicant should meet all of the following requirements pertaining to the required background courses:

1) Have taken two semesters of university level math at the level of Calculus I or above.

2) Have at least a B average in all of the background courses taken.

Degree Requirements
The MS degree requires 30 credit hours for the thesis option, 33 credit hours for the project option, or 36 credit hours for the course work option.

1. Computer theory (3 credit hours)—CS 720, Theoretical Foundations of Computer Science.

2. Advanced courses (12 credit hours)—Four computer science courses numbered 800-889 or CS 898.

3. Electives (9 credit hours)—A coherent block of graduate-level courses from computer science or closely related technical fields, as approved by the candidate's graduate advisor. All computer science electives must be at the 600-level or above.

4. Thesis/Project/Coursework:

A. Thesis (6 credit hours)—The thesis option is usually exercised by students planning to pursue a PhD degree in computer science. This option requires 6 credit hours of thesis research (CS 892) in a specialized area of computer science under the supervision of a computer science graduate faculty advisor. This should culminate in the writing of a thesis. The student should pass an oral final examination by an ad hoc faculty committee headed by the thesis advisor. This examination will pertain to, but is not limited to, the subject matter of the thesis. (30 total hours)

B. Project (9 credit hours)—The project option is usually exercised by students planning to work in industry. This option requires 3 credit hours of project (CS 891), one computer science course numbered 800-889 or CS 898, and one computer science course at the 600-level or above. The project will be supervised by a computer science graduate faculty advisor and can be job-related. The student should write a report on the project and pass an oral final examination by an ad hoc faculty committee headed by the project advisor. This examination will pertain to, but is not limited to, the subject matter of the project. (33 total hours)

C. Coursework (12 credit hours)—Two computer science courses numbered 800-889 or 898, and two computer science courses at the 600-level or above. (36 total hours)
Courses for Graduate/Undergraduate Credit

CS 510. Programming Language Concepts (3). 3R; 1L. 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 and 322, each with a C or better.

CS 540. Operating Systems (3). 3R; 1L. Covers the fundamental principles of operating systems: process synchronization, scheduling, resource allocation, deadlock, 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 301 and 312, each with a C or better, or graduate standing.

CS 560. Data Structures and Algorithms II (3). 3R; 1L. Design and analysis of algorithms and proof of correctness. Analysis of space and time complexities of various algorithms including several sorting algorithms. Hashing, binary search trees, and height balanced trees. Algorithm design techniques including divide and conquer, greedy strategies, and dynamic programming. Elementary graph algorithms. Prerequisites: CS 300, CS 322; and Math 243 and STAT 460 with a C or better in each.

CS 615. Compiler Construction (3). 2R; 2L. 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 with a C or better.

CS 644. Advanced Unix Programming (3). 3R; 1L. 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 with a C or better or instructor's consent.

CS 655. Information Delivery on the Internet (3). 3R; 1L. Explores the capabilities of providing information on the World Wide Web. Information is typically provided through some sort of website that incorporates static text and the dynamic capabilities of the Web. Learn how to create an interactive website through the use of CGI and Java programming and how to interconnect a website 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 with a C or better or instructor's consent.

CS 665. Introduction to Database Systems (3). 3R; 1L. 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 322 with a C or better.

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 684. Applications Systems Analysis (3). 3R; 1L. A study of the methods for analyzing business systems problems and other large-scale applications of the computer. At the crossroads of computer technology, management science and human relations, systems analysis is the keystone in the education of the well-trained computer applications analyst. Includes systems design, cost benefit analysis, data base design, distributed processing, project management, and documentation. Prerequisite: CS 300 with a C or better.

CS 697. Selected Topics (1-3). 1-3R; 1L. Selected topics of current interest. Repeatable for credit with departmental consent. Prerequisite: departmental consent.

CS 720. Theoretical Foundations of Computer Science (3). 3R; 1L. 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 nondeterministic, and concepts of decidability, computability, and formal language theory. Prerequisite: CS 322 or equivalent with a C or better.

CS 742. Computer Communication Networks (3). 2R; 2L. Introduction to network programming for the Internet environment including the basic concepts of TCP/IP, client-server paradigm, programming of clients, and various types of servers, remote procedure calls, concurrency management, and interconnection techniques. Emphasizes the design principles that underlie implementation of practical applications. Prerequisite: CS 300 with a C or better or departmental consent.

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 771. Artificial Intelligence (3). 3R; 1L. Heuristic versus algorithmic methods, principles of heuristic approach, and cognitive processes. Also covers objectives 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 and 322 with a grade of C or better in each.

CS 781. Cooperative Education in Computer Science (1-3). 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 C/NCR only. Prerequisites: departmental consent and graduate GPA of 3.000 or above.

Courses for Graduate Students Only


CS 817. Advanced Java Technology (3). 3R; 1L. Covers advanced features of the Java language, the underlying implementation technology (Java Virtual Machine), and extensions of the Java technology. Includes concurrent object-oriented programming and Java core reflection, and extensions of the Java technology providing parametric polymorphism and persistence. Includes challenging programming projects. Time also devoted to recent Java research and development results. Prerequisite: CS 510 with a B or better.

CS 843. Distributed Computing Systems (3). 3R; 1L. A study of hardware and software features of on-line multiple computer systems emphasizing network design and telecommunications. Includes distributed data bases, interprocess communication and centralization versus distribution. Also includes study of the use of microcomputers in representative configurations. Prerequisites: CS 540 and 742.

CS 862. Advanced Database Systems (3). 3R; 1L. This course covers recent developments and advances in database technology. It is 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). 3R; 1L. Presents 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). 3R; 1L. 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. Prerequisite: CS 665 with a grade of C or better; CS 560 recommended.

CS 865. Principles of DBMS Implementation (3). 3R; 1L. 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, will be covered as time permits. Prerequisite: CS 665 with a grade of C or better; CS 560 recommended.

CS 866. XML Databases (3). 3R; 1L. 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 with a grade of C or better.

CS 867. Object-Oriented Databases (3). 3R; 1L. Covers object-oriented technology as it applies to databases and persistent object systems. Focuses on the advantages of the object-oriented database technology in complex application areas. Java database and persistent technologies and the associated tools have an important role here, along with the related industrial standards, such as ODMG. Provides design and implementation experience using a challenging application. Devoted to recent research and development results. Prerequisites: CS 665 and an object-oriented programming language course such as CS 217 or 350L or instructor’s consent.

CS 868. Database Transaction Management (3). 3R; 1L. Topics covered in this course 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 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; 1L. Topics of current interest to advanced students of computer science. Repeatable for credit with departmental consent. Prerequisite: departmental consent.

Criminal Justice
See Community Affairs, School of.

Earth, Environment and Physical Sciences (EEPS)
Graduate Faculty
Professors: Elizabeth C. Behrman (chairperson, Physics), 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 (chairperson, Geology), Syed Taher, Wan Yang (graduate coordinator)
Assistant Professor: Waldemar Axmann, Hongsheng Cao, William Parcell

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 utilization 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 inter-related 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 non-thesis option B.

Follow up courses (i.e., 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, non-thesis, 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/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 Graduate Catalog of Wichita State University (see the Graduate School website http://webs.wichita.edu/gradsch).

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 requirement 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 choos-
ing thesis research must present a research proposal to the EEPS faculty to ensure that the research has merit and can be completed in a reasonable period of time. After completing the written thesis, the student must give a public oral defense of it.

A total of 30 credit hours is required, among which a maximum of 6 thesis credit hours can be counted toward the degree.

**Internship Option:** Students wishing to gain interdisciplinary and/or professional skills in the field covered by the EEPS program can participate in applied and/or basic research internship projects with 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.

A total of 33 credit hours is required, among which a maximum of 6 internship credit hours can be counted toward the degree.

**Non-Thesis Option:** This option is an alternative to thesis research or internship for degree requirements. Two plans of study are available under this option:

- **Plan A** - Students are required to take research courses, and a total of 36 credit hours is required. This plan is recommended for students who do not desire a career in industry or post-secondary education.
- **Plan B** - Students are required to take research courses and conduct research under the supervision of an EEPS faculty member. A faculty-reviewed, final report is required. A total of 33 credit hours is required, among which a maximum of three research credit hours can be counted toward the degree.

**EEPS 700. Technical Sessions (1).** Through seminar presentations by students, faculty, and guest lecturers, students will critically analyze essential elements and skills of effective oral presentation of scientific research methodology, data, and results to audiences of diverse backgrounds; and will learn techniques of effective utilization of visual display media, presentation styles, and speaker-audience interactions. Must be taken for two semesters for a 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 and emphasizes 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. Prerequisites: graduate standing or instructor’s consent.

**EEPS 702. Research Methods (1).** Essential elements and principles in scientific research, such as project design, funding application, literature research, implementation, collaboration, ethics, and publication. Will include 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. This course must be taken in conjunction with any course (except EEPS 889 and 890) that requires extensive writing. May be repeated twice 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.

**EEPS 760. Whole Earth Geophysics (3).** Examines the principles of physics as applied to both surface features and the interior configuration of the earth. Studies include an understanding and measurement of the physical properties of magnetism, heat flow, seismicity, and gravity. These physical parameters will be used to determine the internal structure and to explain the active processes of the earth. Prerequisites: GEOL 111, MATH 243, and PHYS 214 or equivalent, or consent of instructor.

**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 for 2 credit hours per student. Prerequisite: consent of department supervisor. Prerequisite: EEPS 720 and 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.
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 plans B and C. 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 successful completion 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 elective foreign language, with a successful score determined by the English department.
4. By submitting a transcript showing successful completion of 6 hours of linguistics.

Master’s candidates with a creative writing emphasis (Plan C) have the additional choice of successfully completing 6 semester hours of foreign language in translation in courses approved by the department’s graduate committee as a substitute for the language requirement.

Degree Requirements
ENGL 800, 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 680, Theory and Practice in Composition—and the following courses in linguistics and in literature: ENGL 515, 521, 522, 524, 526, 527, 610, 615, 616, 667, and 672. ENGL 515 and 615 may be taken to fulfill in part the major author and/or optional course requirements of the degree plans. ENGL 521, 522, 524, 526, and 527 may be taken to fulfill the period and/or optional course requirements of the degree plans. 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 three 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 essay, places more emphasis on research, scholarly writing, and the independent study of literature. Plan C emphasizes creative writing. Students are assumed to be following Plan A unless they declare another plan.

Plan A requires the completion of 11 courses for a total of 33 semester hours distributed as follows: ENGL 800, Introduction to Graduate Study in English; two genre courses; three period courses in the ENGL 817-823 series and/or 521-527 series, with a minimum of two courses in English literature and one course in American literature; one course in composition theory and pedagogy (ENGL 680 or 780); and four elective courses in linguistics, literature, or methods of teaching English. With the approval of the Graduate Studies Committee, one of these electives may be taken in the College of Education. Regents’ rules require that at least seven courses be at or above the 700 level. A master’s essay is not required, but students must take a comprehensive examination based on a standardized reading list composed of eight literary texts from across historical periods and surveying the major genres and which is approved by the graduate studies committee. Students in Plan A will also be tested over two works which represent the pedagogy of composition or rhetoric. This list of ten books will include those being examined in the students’ coursework as well as texts to be read outside of class. A new list will be published each semester. Students may take either the December or May comprehensive examination by informing the graduate coordinator of their intent to do so.

Plan B requires ten courses for a total of 30 semester hours distributed as follows: ENGL 800, Introduction to Graduate Study in English; two major author or special topics courses (ENGL 515, 615, 616, 840, 841, 845, or 860), one of which may serve as a context for the development of a thesis prospectus; one genre course consistent with the thesis topic; one period course consistent with the thesis topic; four elective courses; and ENGL 870, Master’s Essay. Regents’ rules require that at least six courses be at or above the 700 level. A candidate’s Plan of Study, approved by the graduate coordinator, should include an appropriate range of courses in canonical and modern literature. Plan B also requires a comprehensive examination based on a standardized reading list composed of 10 literary texts from across historical periods and surveying the major genres and which is approved by the graduate studies committee. This list of 10 books will include those being examined in the students’ coursework as well as texts to be read outside of class. A new list will be published each semester. Students may take either the December or May comprehensive examination by informing the graduate coordinator of their intent to do so.

Plan C, a program with an emphasis on creative writing, requires the completion of 30 semester hours plus a comprehensive examination and a thesis, which must be original work in fiction, poetry, or some other suitable literary form. A student’s program, individually designed in consultation with the director of creative writing, must include 9 semester hours in the graduate creative writing sequence. The final comprehensive examination will be based on a list of 30 book-length works that the student will be held accountable for; the works will be chosen from the creative writing program master list in consultation with the director of creative writing and with the approval of the graduate coordinator. The number of sections of the Plan C comprehensive examination and its length will be equivalent to that given under Plan B, although the content will be based on the list of book-length works described above.

Admission to the Plan C program will be made upon the recommendation of the director of creative writing upon approval of a manuscript or other written evidence of ability to complete the degree. Such recommendation is subject to the final approval of the graduate coordinator.

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 course work 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 course work to allow for a variety of possible interests.

All MFA students are required to take ENGL 800, 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 3.00 grade point average in their previous course work 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 course work 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.

Applicants who earned their undergraduate degrees more than 10 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 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 semester 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 semester 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 semester hours.
2. Three hours in ENGL 800, Introduction to Graduate Study in English, or the equivalent, required of all graduate students. ENGL 800 normally should be included in the student's first semester of graduate study.
3. Three hours in ENGL 830, Graduate Studies in Drama; 832, Graduate Studies in Fiction; or 834, Graduate Studies in Poetry. With departmental consent, each course may be repeated for a maximum of 6 hours credit.
4. Three hours in ENGL 841, Graduate Studies 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 or fine arts outside English. The choice is contingent upon the student's having the proper prerequisites.
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 500 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 500 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 chair. 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 855, 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. Especially for prospective and practicing teachers; may not be taken for credit by students with credit in ENGL 780.

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.

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; literary poetry. Repeatable for credit. Prerequisite: consent of creative writing director.

ENGL 875. MFA Final Writing Project (1-6).

ENGL 880. Writer's Tutorial: Fiction (3). S/U grade only. Tutorial work in creative writing in literary fiction with visiting writer. Prerequisite: consent of creative writing director.

ENGL 881. Writer's Tutorial: Poetry (3). S/U grade only. Tutorial work in creative writing in literary poetry with visiting writer. 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
themselves 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.

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 727. Teaching English as a Second Language (2-3). Cross-listed as LING 727. Discusses current methods of teaching English to non-native speakers. Students learn to analyze interlanguage patterns and to design appropriate teaching units for class and language laboratory use.

Literature

Courses for Graduate/Undergraduate Credit

ENGL 503. Studies in 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. Prerequisite: junior standing and one college literature course.

ENGL 504. Studies in 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. Prerequisite: junior standing and one college literature course.

ENGL 512. Studies in Fiction (3). Subjects announced each semester. Repeatable once for credit. Prerequisite: junior standing and one college literature course.

ENGL 513. Studies in Poetry (3). Subjects announced each semester. Repeatable once for credit. Prerequisite: junior standing and one college literature course.

ENGL 514. Studies in Drama (3). Subjects announced each semester. Repeatable once for credit. Prerequisite: 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 521. Readings in Medieval Literature (3). English and Continental literature, 12th to 15th century. Chaucer, Malory, the Pearl Poet, medieval lyric, drama, epic, romance, and saga. Prerequisites: junior standing and one college literature course, or instructor's consent.

ENGL 522. Readings in Renaissance Literature (3). Sidney, Spenser, Shakespeare (poetry), Donne, Jonson, Milton, and their contemporaries. Prerequisites: junior standing and one college literature course, or instructor's consent.

ENGL 524. Readings in Restoration and 18th Century Literature (3). Swift, Pope, Johnson, and their contemporaries. Prerequisites: junior standing and one college literature course, or instructor's consent.

ENGL 526. Readings in Romantic Literature (3). Blake, Wordsworth, Coleridge, Byron, Shelley, Keats, and their contemporaries. Prerequisites: junior standing and one college literature course, or instructor's consent.

ENGL 527. Readings in Victorian Literature (3). Writers from Carlyle to Yeats studied in relation to political events and the social, scientific, and religious thought of the age. Prerequisites: junior standing and one college literature course, or instructor's consent.

ENGL 532. Studies in Modern British Literature (to 1950) (3). English and Irish literature of the first half of the 20th century. Subjects announced each semester. Repeatable once for credit. Prerequisite: junior standing and one college literature course.

ENGL 533. Studies in Contemporary Literature (3). Modern literature, primarily British and American, since 1950. Subjects announced each semester. Repeatable once for credit. Prerequisites: junior standing and one college literature course.

ENGL 535. Literary Images of Women: Diverse Voices (3). Cross-listed as WOMS 535. Explores literary works written in English by women of diverse ethnic, racial, class, and other backgrounds, as well as of varying sexual orientations, ages, and degrees of physical ability. Materials analyzed both as literary works and as expressions of women's differences from one another. Works selected on their specific attention to the question of gender as it intersects with other elements of culture.

ENGL 536. Writing by Women (3). Cross-listed as WOMS 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 580. Special Studies (1-3). Topic selected and announced by the individual instructor. Repeatable once for credit. Prerequisite: departmental consent. Prerequisites: junior standing and one college literature course.

ENGL 610. Old English (3). Cross-listed as LING 610. Studies the Old English language in enough detail to enable the reading of some prose and poetry, including parts of Beowulf in the original. Some literature, including all of Beowulf, is read in translation, with attention to important literary and cultural features of the period. Prerequisites: junior standing and one college literature course.

ENGL 615. Chaucer (3). Chaucer’s Canterbury Tales, Troilus and Cressida, and selected lyrics, with a few works by other late 14th century authors and some critical and historical studies. Focuses on close reading of Chaucer in Middle English. Prerequisites: junior standing and one college literature course, or instructor's consent.

ENGL 750. Workshop (2-4). Repeatable for credit.

Courses for Graduate Students Only

ENGL 800. 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 814. Graduate Studies in British and World Literature before 1900 (3). Examines the major genres and authors of literature before 1900. Typical subject matter will include the rise of the novel, the changing role of poetry, and the evolution of drama as written by the major figures. Authors may include Dryden, Richardson, F호, Austen, and Cervantes among the novelists; Dryden, Pope, Blake, Rilke, and Lorca among poets; and Webster, Ford, Behn, and Wilde among the dramatists. Repeatable once for credit with a change of content. Prerequisite: Graduate standing.

ENGL 817. Graduate Readings in 20th Century British Literature (3). Yeats, Joyce, Lawrence, Auden, Spencer, and their contemporaries.

ENGL 821. Graduate Readings in American Literature I (3). From the beginnings to 1870 emphasizing Emerson, Thoreau, Hawthorne, Melville, Whitman and Dickinson.

ENGL 822. Graduate Readings in American Literature II (3). From 1870 to 1920 emphasizing James, Twain, Crane, Dreiser, Robinson and Frost.

ENGL 823. Graduate Readings in American Literature III (3). From 1920 to 1970, including Eliot, Stevens, Hemingway, Faulkner, and their contemporaries.
ENGL 830. Graduate Studies in Drama (3). Selected topics in the history and nature of dramatic literature.

ENGL 832. Graduate Studies in Fiction (3). Selected topics in the development of the form and content of prose fiction.

ENGL 834. Graduate Studies in Poetry (3). Selected topics in forms, techniques, and history of poetry.

ENGL 840. Graduate Studies in Criticism (3). Selected topics in the theory and practice for literary criticism.

ENGL 841. Graduate Studies 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.

ENGL 845. Graduate Studies in a Major Author (3). Careful study of the works of a major author with readings in secondary sources; reports, discussions, and papers. Repeatable for credit with change of content.

ENGL 855. Directed Reading (2-3). For graduate students who want to pursue special research in areas not normally covered in course work. Repeatable for credit with departmental consent. 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 870. Master’s Essay (1-3).

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 495. 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: Collette D. Burke, John C. Gries (chairperson), Wan Yang (graduate coordinator)
Assistant Professors: Hongsheng Cao, William Parcell

Although applications are not being accepted for the MS program in geology pending restructurings of the graduate program, the following courses are available for graduate credit.

Courses for Graduate/Undergraduate Credit

GEOL 526. Sedimentary Geology (3). 2R; 3L. Origin, classification, primary structures, and physicochemical processes controlling deposition of sedimentary rocks. Reviews diagenesis of carbonate rocks and evaporites. Includes a survey of modern and ancient sedimentary 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, alidade, 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; GEOG 312, and GEOG 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). General education further study course. 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. General education further study course. Systematic survey of major fossil biogeochemical materials, analysis of the origin and evolution of life, and paleoecological interpretation of ancient environments and climates. Includes handlens and binocular microscopic examination of major fossil biogeochemical materials. Includes application of analyzed fossil data to the solution of problems in biogeochronology; paleocology, paleoecology, and paleogeography. Cites examples from fields of invertebrate, vertebrate and microfossilogy and palynology. May require museum and field trips. Prerequisite: GEOL 312.

GEOL 574. Special Studies in Paleontology (3). 2R; 3L. General education further study course. A systematic study in selected areas of biogeochemistry and paleontology. 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 biogeographical 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 111; 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; (C). 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. Prerequisites: GEOG 324, 540, 544, and 552.
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 (3). 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 (1-3). 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) paleontology, (f) economic geology, (g) sedimentation, (h) stratigraphy, (i) geophysics, and (j) petroleum. Requires a written final report. Prerequisite: consent of sponsoring faculty.

GEOL 702. Environmental Science I (5) 2R; 3L. Advanced theoretical and applied principles of the interdisciplinary study of environmental science. Includes chemical cycling, atmospheric chemistry, aquatic chemistry, and phase interactions. Prerequisite: acceptance in the master's program in environmental science or instructor's consent.

GEOL 703. Environmental Science II (5) 2R; 3L. 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 master's of environmental science program. Prerequisite: GEOL 702 or instructor's consent.

GEOL 704. Environmental Science Colloquium (1). Cross-listed as CHEM 704. Students in the master environmental science 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 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: Environmental Science I and II.

GEOL 710. 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 720. Geochronology (3). The study of the geologic time scale; the effects of geological processes; the application of radioactive dating methods to the study of the earth's history; and the response of inorganic and organic substances to subaqueous and framework chemistries. Computer simulation models used whenever practical along with detailed analysis of case histories, including those related to environmental geoscience. Prerequisite: GEOL 650, 681, MATH 344, 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 diagenesis of carbonate sediments and rocks. Includes mineralogic stability in natural waters, meteoric, marine and deep-burial diagenesis, dolomitization processes and products, trace-elements and isotopes as diagenetic tools, cathodoluminescence and x-ray diffraction studies of carbonates; origin and porosity. Prerequisite: GEOL 726 or instructor's consent.

GEOL 730. Perspective: Geoscience and the Environment (3). A perspective of global issues of geo-environmental 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; cratonic sequences of North America. Required 7-day field trip. Prerequisites: GEOL 312, 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. Cover 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 framework chemistries. Computer simulation models used whenever practical along with detailed analysis of case histories, including those related to environmental geoscience. Prerequisite: GEOL 650, 681, MATH 344, 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 tech-
tiques. 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 nonlinear discriminate analysis, various factor analytic techniques, hard and fuzzy clustering, linear and non-linear unmixing 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.

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; repeatable for credit when content differs. May require field trips. Prerequisites: graduate standing, instructor’s consent, and two years of professional postgraduate practice in geology.

GEOL 821. Special Studies in Geochemistry (1-6). 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 geochemistry; (e) exogenic geochemical cycling; (f) stable isotope geochemistry. May be repeated for credit to cover all six areas listed. May require some laboratory work. 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; repeatable for credit when locality and content differ. Where appropriate, travel, lodging, and board costs are charged. 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, 761; 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, biostatigraphy, 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 isoeto chronostatigraphic 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.

GEOL 890. Thesis (1-6). Prerequisite: departmental consent.
Courses for Graduate/Undergraduate Credit

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 500- and 600-level Courses</td>
<td>General education further study course. Colonization of the New World emphasizing the British colonists and their development.</td>
<td>9-11</td>
</tr>
<tr>
<td>HIST 501</td>
<td>Thesis Research</td>
<td>2</td>
</tr>
<tr>
<td>HIST 502</td>
<td>Thesis</td>
<td>2</td>
</tr>
<tr>
<td>HIST 803*</td>
<td>Internship</td>
<td>2-4</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>35</td>
</tr>
</tbody>
</table>

*HIST 781, Cooperative Education in History, may be substituted for HIST 805 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

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 501</td>
<td>The American Colonies (3)</td>
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<tr>
<td></td>
<td>General education further study course.</td>
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<tr>
<td></td>
<td>Colonization of the New World emphasizing the British colonists and their development.</td>
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<tr>
<td>HIST 502</td>
<td>The American Revolution and the Early Republicanism (3)</td>
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<td></td>
<td>General education further study course.</td>
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<tr>
<td></td>
<td>Examination of selected phases of the revolutionary, confederation, and federal periods.</td>
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<tr>
<td>HIST 503</td>
<td>The Age of Jefferson and Jackson (3)</td>
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<td></td>
<td>General education further study course.</td>
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<tr>
<td></td>
<td>This course 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.</td>
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<tr>
<td>HIST 504</td>
<td>Civil War (3)</td>
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<td></td>
<td>General education further study course.</td>
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<td></td>
<td>This course explores the origins and history of the bloodiest war this nation has ever fought. Students will study ante-bellum America, focusing on the sectional differences between North and South, the institution of slavery, and the abolitionist crusade; and the battlesfields of the Civil War.</td>
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<tr>
<td>HIST 505</td>
<td>The United States, 1865 to 1900 (3)</td>
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<tr>
<td></td>
<td>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.</td>
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<tr>
<td>HIST 507</td>
<td>The United States, 1900-1945 (3)</td>
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<td></td>
<td>General education further study course.</td>
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<td></td>
<td>Major topics explored in this class 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 will be a major component of this course. The emphasis, however, will be “history from the bottom up” as we examine the lives of ordinary Americans.</td>
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<td>HIST 508</td>
<td>The United States Since 1945 (3)</td>
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<td></td>
<td>General education further study course.</td>
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<td></td>
<td>In this time period, the United States emerged as a world leader. Although the Cold War became a defining force both at home and abroad, “hot” wars in Korea and Viet Nam also produced social, economic, and political repercussions in the United States. This 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.</td>
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<tr>
<td>HIST 511</td>
<td>Women in Early America, 1600-1850 (3)</td>
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<tr>
<td>HIST 512</td>
<td>Women and Reform in America, 1850-present (3)</td>
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<tr>
<td>HIST 515</td>
<td>Economic History of the United States (3)</td>
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<td></td>
<td>Cross-listed as ECON 627</td>
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<tr>
<td>HIST 516</td>
<td>History of American Business (3)</td>
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<tr>
<td></td>
<td>A history of American enterprise from colonial times to the present, emphasizing the industrial age since the Civil War, on case studies of individual firms, on biographies of business people, and on the social and political impact of business.</td>
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<tr>
<td>HIST 517</td>
<td>Diplomatic History of the United States (3)</td>
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<tr>
<td>HIST 518</td>
<td>Constitutional History of the United States (3 &amp; 3)</td>
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<td></td>
<td>General education further study courses.</td>
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<td></td>
<td>517: American constitutional system from English and colonial origins through the Civil War. 518: American constitutional development from Reconstruction to the present.</td>
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<tr>
<td>HIST 521</td>
<td>Diplomatic History of the United States to 1914 (3)</td>
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<td>General education further study course.</td>
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<td></td>
<td>Beginning with the colonial era, this course examines the diplomatic history of the United States to the brink of American participation in the First World War. The focus will be on the movement toward independence, territorial expansion across the continent, the Civil War and the emergence of America as a world power.</td>
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<tr>
<td>HIST 522</td>
<td>Diplomatic History of the United States Since 1900 (3)</td>
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<td></td>
<td>General education further study course.</td>
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<td>This course examines American diplomatic history during the twentieth 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.”</td>
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<tr>
<td>HIST 525</td>
<td>American Military History (3)</td>
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<td>General education further study course.</td>
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<td>This course surveys the American military heritage and its role in shaping the modern United States. Students will study 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.</td>
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<td>HIST 528</td>
<td>History of Wichita (3)</td>
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<td>General education further study course.</td>
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<td></td>
<td>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.</td>
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<td>HIST 530</td>
<td>The American Woman in History (3)</td>
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<td></td>
<td>General education further study course.</td>
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<tr>
<td></td>
<td>Examination of the history, status, and changing role of women in American society.</td>
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<td>HIST 531</td>
<td>American Environmental History (3)</td>
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<td>General education further study course.</td>
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<td></td>
<td>Examines the historical, physical, economic, scientific, technological, and industrial interactions of the peoples of America with their environment. Emphasizes the period, 1800-present.</td>
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<td>HIST 532</td>
<td>Women in Ethnic America (3)</td>
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<td></td>
<td>Cross-listed as WOMS 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.</td>
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<td>HIST 533</td>
<td>The American City: from Village to Metropolis (3)</td>
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<td></td>
<td>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.</td>
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<td>HIST 534</td>
<td>History of the Old South (3)</td>
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<td></td>
<td>Examines Southern civilization prior to the American Civil War.</td>
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<td>HIST 535</td>
<td>History of Kansas (3)</td>
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<td></td>
<td>General education further study course.</td>
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<td></td>
<td>History of the Kansas region from Spanish exploration to the present, emphasizing the period after 1854.</td>
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<td>HIST 536</td>
<td>Survey of American Indian History (3)</td>
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<td>General education further study course.</td>
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<td>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.</td>
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<td>HIST 537</td>
<td>The Trans-Mississippi West (3)</td>
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<td></td>
<td>Spanish, French, and Anglo-American penetration and settlement west of the Mississippi River from the 16th century to about 1900.</td>
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<tr>
<td>HIST 538</td>
<td>The American West in the Twentieth Century (3)</td>
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<td>General education further study course.</td>
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<td></td>
<td>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.</td>
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<td>HIST 541</td>
<td>Modern France (3)</td>
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<td>General education further study course.</td>
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<td></td>
<td>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.</td>
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</tbody>
</table>
HIST 553. History of Mexico (3). General education further study course. “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 Pancho 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). General education further study course. 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 will be given to the Minoans and Mycenaeans.

HIST 559. Classical Athens (3). General education further study course. 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). General education further study course. Begins with the conquests of Alexander the Great and provides an overview of the new Greek world which he left behind. Will also examine changes in Greek culture and society as a result of the spread of Hellenism to the older kingdoms of the New East and India. Will include the rise of the Roman Republic in the context of the Greek world in the first century BC with the defeat of Cleopatra, or the last queen of Egypt.

HIST 562. The Roman Republic (3). General education further study course. 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). General education further study course. 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 1st century BC. Ends with the sack of Rome in the 5th century AD. 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). General education further study courses. 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 Angevins, the reign of Edward I, and the daily life of those peoples who become the English will receive particular attention.

HIST 575. The Italian Renaissance (3). General education further study course. Italian history from the 14th through the 16th centuries emphasizing cultural achievements.

HIST 576. The Reformation (3). General education further study course. 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). General education further study course. 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). General education further study course. 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,” 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). General education further study course. Covers the social, political, and cultural history of Kievan and Muscovite Russia.

HIST 589. History of Imperial Russia (3). General education further study course. A survey of the political, social, and cultural history of Imperial Russia.

HIST 592. History of the Soviet Union (3). General education further study course. A survey of Soviet history from the Bolshevik Revolution to the present.

HIST 593. Former Soviet Union (3). General education further study course. An examination of contemporary life in the former USSR: historical background, Marxist/Lenist 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 undergraduate history majors. This capstone course engages students in a systematic analysis of major historians and schools of historical thought. Class assignments and discussion encourage students to examine their own ideas about history as an academic discipline. Prerequisite: 12 upper-division hours in history or instructor 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. Student 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 Method (3). Reviews basic historical research methods, the general character of field bib-
liographies 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 729. Seminar in American History (3). 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 734. 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 (1-4). 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. Prerequisite: instructor's consent. Offered Cr/NCr only.

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 vary depending on student's interests and work setting. Internship should be in an 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), Doris Chang (women's studies), Elsie Shore (psychology), Dorothy Billings (anthropology), 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 3.00 or better for the last 60 hours of course work. 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 advisors. One of these advisors, who must be a graduate faculty member of Fairmount College of Liberal Arts and Sciences, will serve as the student's primary advisor and chair the student's committee.

Before completing the first 12 hours of graduate work in the program, the student must:
1. Complete selection of 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.
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 semester hours of credit
2. No more than 12 semester 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.

6. A master's thesis for 6 credit hours 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 3.00 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 course work, including three required courses (LASI 501, 510, and 800) with the remaining courses selected from these designated courses: ANTH 612, ANTH 613, BIOL 503, BIOL 575, ENGL 860, GEOL 562, GEOL 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 course work, including LASI 201 and 501; undergraduates must have senior status or instructor's consent.

LASI 680. International Student Exchange Program—Graduate (1). 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/her assigned program adviser to request aca-
LÄSI 750. Workshop: Special Topics (1-3). Meets identified needs of specific audiences.

Courses for Graduate Students Only

LÄSI 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.

LÄSI 875. Thesis (1-6). For students who are finishing the Master of Arts in Liberal Studies. The student writing a thesis is enrolled 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.

LÄSI 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, practicum, curriculum development, or some other individualized activity. The project must have been 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

Professors: Tina L. Bennett, Lawrence M. Davis

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. Linguistics. 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. Linguistics. Studies in Language Variety (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. French. Advanced 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. Russian Phonology (2). Cross-listed as RUSS 505.

LING 505C. Spanish. Spanish Phonetics (2). Cross-listed as SPAN 505.

LING 610. English. Old English (3). Cross-listed as ENGL 610. Studies the Old English language in enough detail to enable the reading of some prose and poetry, including parts of Beowulf in the original. Some literature, including all of Beowulf, is read in translation, with attention to important literary and cultural features of the period. Prerequisites: junior standing and one college literature course.

LING 635. French and Spanish. Introduction to Romance Linguistics (3). Cross-listed as FREN 635 and SPAN 635.

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 727. Teaching English as a Second Language (2-3). Cross-listed as ENGL 727. Discusses current methods of teaching English to non-native speakers. Students learn to design appropriate teaching units for class and language laboratory use.

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 (1-3). 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 (1-3). Credit assigned to Group A, B, or C depending on content. Repeatable for credit.

Mathematics and Statistics

Graduate Faculty

Professors: Andrew Acker, Alexandre Boukhoumein, Dharam V. Chopra, Thomas DeLillo, Alan R. Elcrat, Buma L. Fridman (chairperson), John J. Hutchinson, Victor Isakov, Kirk E. Lancaster, Daowei Ma, Kenneth G. Miller (graduate coordi-

ator), Zhiren Jin, Hari Mukerjee, Phillip E. Park-
or, Ziqi Sun

Associate Professors: Stephen W. Brady, Lop-Hing Ho, Xiaomei Hu, Chunsheng Ma

Assistant Professors: Thalia Jeffers, John Robertson, Christian Wolf, Jianliang Qian

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 3.00 in mathematics courses, and meet Graduate School admission requirements.

Degree Requirements

To complete the MS degree, students must earn 33 semester hours of graduate credit*, with a minimum of 24 semester 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. A compre-
Admission Requirements

Admission to the doctoral program will be through the Admissions and Exceptions Committee of the department. Students may enter the doctoral program in mathematics and statistics if they have the prerequisites for the initial required courses, have taken the GRE Subject Test in Mathematics, and have a 3.00 overall grade point average and a 3.25 grade point average in mathematics and statistics.

Students may satisfy the prerequisites for the initial requirements if they have taken 3 hours of coursework in each of the following: advanced calculus, modern algebra, linear algebra, and numerical methods.

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 below 700 may not be included. At least 36 hours must be in mathematics and 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:

A) Complex Analysis I and II (MATH 745 and 845). Partial Differential Equations I and II (MATH 755 and 855), Functional Analysis I and II (MATH 941 and 942), and Numerical Analysis of Partial Differential Equations (MATH 852).
B) Theory of Statistics I and II (STAT 771 and 772), Theory of Probability I and II (STAT 861 and 862), Theory of Statistical Inference 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 advisor 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.

Doctor of Philosophy

The primary emphases in the doctoral program in applied mathematics are partial differential equations, probability and statistics, and computational mathematics. The primary emphases in the doctoral program in applied mathematics are partial differential equations, probability and statistics, and computational mathematics.

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 below 700 may not be included. At least 36 hours must be in mathematics and 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.

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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.

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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.

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Courses for Graduate/Undergraduate Credit

Credit in courses numbered below 600 is not applicable toward the MS in mathematics.

MATH 501. Elementary Mathematics (3). 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. Prerequisites: elementary education major and MATH 111 or equivalent with C or better or departmental consent.

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 C 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 C or better.

MATH 531. Fundamental Concepts of Algebra (3). 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 C or better in each.

MATH 531. 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 C 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 C or better.

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' Theorem, and the Divergence Theorem. Also includes the study of improper integrals with application to special functions. Prerequisite: MATH 344 with C 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 C or better in each.

use. Prerequisites: MATH 344 and 451 with C 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 C 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 C 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 Euclidean MATH 615. Elementary Number Theory (3). Studies Euclidean MATH 640. Advanced Calculus II (3). A study of fundamental concepts of geometry. Prerequisite: MATH 513 with C or better or departmental consent.

MATH 621. Elementary Geometry (3). Studies Euclidean geometry from an advanced point of view. Prerequisite: MATH 344 with C or better or departmental consent.

MATH 640. Advanced Calculus II (3). A continuation of MATH 547. Prerequisites: MATH 511 and 547 with C 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 C 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 C 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 C or better or departmental consent.

MATH 713. Abstract Algebra I (3). Treats the standard basic topics of abstract algebra. Prerequisite: MATH 513 with C 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 C or better or departmental consent.

MATH 725. Topology I (3). Studies the results of point set and algebraic topology. Prerequisite: MATH 547 with C 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 C or better or departmental consent.

MATH 745. Complex Analysis I (3). Studies the theory of analytic functions. Prerequisite: MATH 640 with C 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 C 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 C 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 C 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 C 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 C 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 I (3). Advanced topics in mathematics of interest to engineering students, including tensor analysis, calculus of variations and...
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 (1-3). Repeatable up 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 947-948. Mathematical Theory of Fluid Dynamics I and II (3-3). Navier-Stokes and Euler equations, potential and II (3-3).

MATH 949-950. Selected Advanced Topics in Numerical Analysis I and II (3-3). Mechanics of fluid flow, momentum and energy principles, Navier-Stokes and Euler equations, potential and II (3-3).


MATH 959. Selected Topics in Applied Mathematics (3-3). Prerequisites: MATH 751, 851, and instructor's consent.

MATH 964-968. Mathematical Theory of Fluid Dynamics I and II (3-3). Mechanics of fluid flow, momentum and energy principles, Navier-Stokes and Euler equations, potential and II (3-3).

MATH 970. Probability (3). A study of axioms of probability, discrete and continuous random variables, expectation, elements of decision theory and the Neyman-Pearson theory of testing hypotheses. Prerequisites: MATH 743 and STAT 761 or 771.

MATH 971. Applied Regression Analysis (3). Studies linear, polynomial, and multiple regression. Includes applications to business and economic, behavioral and biological sciences, and engineering. Uses computer packages for doing problems. Prerequisites: MATH 511 and MATH 344 and 511 with C or better or departmental consent.

MATH 972. Applied Stochastic Processes (3). Studies random variables, expectation, limit theorems, Markov chains, and stochastic processes. Prerequisite: MATH 761 or 771 with C or better or departmental consent.

STAT 761. Probability (3). A study of axioms of probability, discrete and continuous random variables, expectation, elements of distribution functions, moment generating functions, and sequences of random variables. Prerequisite: MATH 344 with C or better.

STAT 762. Applied Regression Analysis (3). Studies random variables, expectation, limit theorems, Markov chains, and stochastic processes. Prerequisite: STAT 761 or 771 with C or better or departmental consent.

STAT 764. Analysis of Variance (3). An introduction to experimental design and analysis of data under linear statistical models. Studies single-factor designs, factorial experiments with more than one factor, analysis of covariance, randomized block designs, nested designs, and Latin square designs. Uses computer packages for doing problems. Prerequisites: STAT 571 and MATH 344 and 511 with C or better or departmental consent.

STAT 771-772. Theory of Statistics I and II (3-3). An examination of stochastic dependence distributions of functions of random variables limiting distributions, order statistics, theory of statistical inference, nonparametric tests, and analysis of variance and covariance. Prerequisite: MATH 545 or 547 with C or better or departmental consent.

STAT 774. Statistical Computing I (3). Trains students to use modern statistical software for statistical modeling and writing of technical reports. 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 777. Statistical Computing I (3). Trains students to use modern statistical software for statistical modeling and writing of technical reports. 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 777. Statistical Computing I (3). Trains students to use modern statistical software for statistical modeling and writing of technical reports. 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 785. Design of Experiments I (3). A study of basic concepts of experimental design which include completely randomized design, randomized block design, randomization theory, estimation and tests, Latin square design, factorial experiments, confounding, split-plot designs, incomplete block designs, and intra- and inter-block information. Prerequisite: STAT 572 or 772.

STAT 786. 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 787. 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 (1-3). 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 C or better or departmental consent.

STAT 971 & STAT 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. PhD Dissertation (1-9). Repeatable to a maximum of 6 hours. Prerequisite: must have passed the PhD qualifying exam and instructor's consent.

Modern and Classical Languages and Literatures
Graduate Faculty
Professors: Pedro Bravo-Elizondo, Gary H. Toops
Associate Professors: Wilson Baldridge, Eunice Myers (chairperson), Brigitte Roussel
Assistant Professors: Maria Akrabova (graduate coordinator), Michael McGlynn, Marat Sanatullov; Kerry Wilks

French (FREN)
Although a complete graduate program is not available currently in French, the following courses may apply toward a master's degree if approved in advance of enrollment by the student's advisor, 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. All literature courses, including FREN 223 and 300, may fulfill the LAS literature requirement.

FREN 505. French Phonetics (3). 2R; 1L. Cross-listed as LING 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.

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) composition, (i) problems in teaching French, (j) civilization, (l) translation, (k) conversation, and (m) phonetics. Repeatable for credit. Prerequisite: departmental consent.

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 compositions, and detailed study of modern French grammar. Prerequisite: FREN 324 or departmental consent.

>FREN 540. French Literature in English Translation (3). General Education further studies course. 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 English Translation (3). General Education further studies course. A study of the concept of Negritude through the works of major contemporary African and Caribbean writers. No knowledge of a foreign 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 civilization 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/Corequisite: 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/Corequisite: FREN 300.

FREN 623. Seminar in French (3). Seminar in French literature, language, or civilization. Prerequisite: FREN 300. Repeatable for credit.

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. An introduction to the phonology, morphology, and syntax of the Romance languages, emphasizing French and Spanish. Prerequisite: departmental consent.

FREN 636. Contemporary French Literature (3). Analyzes and discusses major works of French fiction, poetry, and drama, 1945-present. Prerequisite: FREN 300.

FREN 726. French Composition and Style (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.

Course 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 available currently in German, the following courses may apply toward a master's degree if approved in advance of enrollment by the student's advisor, the chairperson of the Department of Modern and Classical Languages and Literatures, and the dean of the Graduate School.

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 344 or instructor's consent.
Greek (Ancient Classical) (GREK)
Although a complete graduate program is not available currently 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 224 or instructor's consent.

Latin (LATN)
Although a complete graduate program is not available currently in Latin, the following courses may apply toward a master's degree.

Courses for Graduate/Undergraduate Credit
LATN 224. Directed reading of Latin. Repeatable for credit. Prerequisite: LATN 224 or departmental consent.


LATN 541. Roman Lyric Poetry (3). The lyric poems of Catullus and Horace emphasizing imagery, symbolism, structure, diction, and meter.

LATN 542. Vergil'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 Democritan materialism. Gives consideration to the place of Lucretius in Latin poetry.

Modern and Classical Languages and Literatures (MCLL)

Course for Graduate/Undergraduate Credit
MCLL 661. 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.

Russian (RUSS)
Although a complete graduate program is not available currently in Russian, the following courses may apply toward a master's degree.

Courses for Graduate/Undergraduate Credit
RUSS 505. Russian Phonology (2). Cross-listed as LING 505. 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 (intonatsionnye 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). Consideration of the works of one or two major authors, a literary movement, trend, or specific genre. No knowledge of Russian is necessary, although some is desirable. Repeatable once for credit. 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. Nonnative 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 semester 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. All literature courses, including SPAN 223 and 300, may fulfill the general education literature requirement.

SPAN 505. Spanish Phonetics (2). Cross-listed as LING 505. Includes articulatory phonetics, phonemics, sound/symbol correspondences, dialectical 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 525. Spanish Conversation III (2). Increases proficiency in spoken Spanish. Assignments include oral reports and dialogues. Prerequisite: SPAN 525 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 623. Seminar in Spanish (1-5). Seminar in Spanish literature, language, or civilization. Repeatable for credit. Prerequisite: SPAN 300.

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. Prerequisite 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. Prerequisite or Corequisite: SPAN 300 or departmental consent.

SPAN 631. Latin-American Short Story (3). Study of the main writers in contemporary Latin-American literature. Prerequisite: SPAN 300 or departmental consent.

SPAN 635. Introduction to Romance Linguistics (3). Cross-listed as LING 635 and FREN 635. An introduction to the phonology, morphology, and syntax of the Romance languages, emphasizing French and Spanish. Prerequisite: departmental 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, (i) 20th century poetry, (k) criticism, (l) literature, (m) 20th century theatre, (n) contemporary Spanish novel, (o) picaresque novel, and (p) 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, (i) theater, (k) Latin-American literature, and (l) L. Am. novel and film.

Philosophy (PHIL)

Graduate Faculty
Professor: David Soles, Deborah H. Soles, Robert Feleppa
Associate Professors: Jeffrey Hershfield
Assistant Professor: William Vanderburgh

Although there is no graduate degree in philosophy, the following courses are available for graduate credit.

Courses for Graduate/Undergraduate Credit

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 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 relations of social science with natural science and philosophy, methodological problems peculiar to social science, the nature of sound explanation concepts, and constructs and the roles of mathematics and formal theories in social science.

PHIL 690. 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 con-
Physicists (PHYS)
Graduate Faculty
Professors: Elizabeth C. Behrman (chairperson), Hussein Hamdeh (graduate coordinator), James C. Ho
Associate Professors: Syed M. Taher
Assistant Professors: Waldemar Axmann, Jason Ferguson

Although applications are not being accepted for the M.S. 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: in-service or pre-service 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 511.

PHYS 517. Electronics Laboratory (2). 1R; 3L. Experiments in electronics that treat some of the applications of electronics in scientific research. Experiments cover the uses of vacuum tubes, transistors, IC, and digital circuits. Prerequisite: PHYS 314.

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 or 314 or departmental consent. Corequisite: MATH 344.

PHYS 560. 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 a brief introduction to the FORTRAN language. Prerequisites: PHYS 551 and MATH 555.

PHYS 621. Elementary Mechanics I (3). Motion of a particle in one and several dimensions, central forces, the harmonic oscillator, and the Lagrangian formulation of mechanics. Prerequisites: PHYS 214 or 314 and MATH 344 with grades of C or better.

PHYS 622. Elementary Mechanics II (3). A continuation of PHYS 621 and will cover dynamics of a system of particles, rotating coordinate systems, dynamics of rigid bodies, coupled oscillations, and special relativity. Prerequisite: PHYS 621.

PHYS 631. Electricity and Magnetism (3). Direct and alternating currents; electric and magnetic field theory, including an introduction to Maxwell’s electromagnetic wave theory. Prerequisites: PHYS 214 or 314 and MATH 344 with grades of C or better.

PHYS 641. Thermodynamics (3). The laws of thermodynamics, distribution functions, Boltzmann equation, transport phenomena, fluctuations, and an introduction to statistical mechanics. Prerequisites: PHYS 214 or 314 and MATH 344.

PHYS 651. Quantum Mechanics I (3). Introduction to quantum mechanics, the Schroedinger 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 will also be included. Corequisite: PHYS 651.

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 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 Schroedinger 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 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 semiconductor devices. Prerequisites: MATH 555 and PHYS 651 or departmental consent.

Political Science (POLS)
Graduate Faculty
Associate Professors: David F. Ericson, James F. Sheffield, Jr.
Assistant Professor: Carolyn Shaw

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 522. Government and Politics of Latin America (3). General education further study course. An examination of the political institutions and processes that currently exist in...
the Latin American republics. Emphasizes the social, economic and psychocultural factors affecting these institutions and processes.

POLS 524. Politics of Modern China (3). General education further study course. 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). General education further study course. This course explores the dynamic decision making process in the development of U.S. foreign policy. It 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). General education further study course. 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). General education further study course. 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). General education further study course. 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 575. Latin American International Politics (3). Reviews historical and current issues relating to the international relations of Latin America and the Caribbean. It examines the relations among Latin American countries, as well as the relations of Latin American states with other regions of the world, in particular the United States, the European Union and Canada. It also takes a look at the position of Latin American and Caribbean states in the major sub-regional, regional and hemispheric organizations. The course discusses current political issues such as democratization, human rights, security, transnational crime and migration, as well as those related to economic issues (trade agreements, international investment and globalization).


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 for graduate grade only. Prerequisite: departmental consent.

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 review a seminar paper they wrote during their area of emphasis. Paper is written under the direction of a faculty member. Prerequisite: departmental approval.

POLS 874. Internship. (3-6). S/U grade only. 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/her own department. Prerequisite: departmental consent.

POLS 875. Research Design (3). S/U grade only. Requires the development of a research design for the thesis. The design must be submitted to a departmental committee for evaluation and approval. Prerequisite: departmental consent.

POLS 876. Thesis (1-3).

Psychology (PSY)

Graduate Faculty

Professors: Charles A. Burdsal, Jr. (chairperson), Peter A. Cohen (dean, College of Health Professions), Darwin Dorr (clinical coordinator), Gary Greenberg (emeritus), Charles Halcomb (human factors coordinator), Gregory J. Meissen; Elsie R. Shore, James J. Snyder

Associate Professors: Alex Chaparro, Rhonda K. Lewis, Louis J. Medvene (community coordinator), Donald W. Nance, Marilyn L. Turner, Robert D. Zettle (graduate coordinator)

Assistant Professors: Paul D. Ackerman, Barbara Chaparro, Darce L. Datteri (undergraduate coordinator), Daniel S. McConnell, 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 February 1 (Clinical), March 1 (Community), or March 15 (Human Factors), 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

Ethics:
PSY 900, Ethics and Psychology
(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.)

2nd 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 per day during the first semester and three hours each semester following.

Post 2nd 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 Ph.D. are required to complete a dissertation. The dissertation ordinarily is a major research project which must be preceded by approval of a formal written proposal by the student's dissertation committee. A student must be enrolled in PSY 908 (Doctoral Dissertation) any time a student is working on his/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 923, Seminar in Motor and Sensory Processes
PSY 925, Seminar in Perception
Electives: Sufficient electives to total (all courses) 90 credit hours, 12 of which must be taken outside the Human Factors program.

Calculus Tool: 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/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 961, Seminar in Cognitive-Behavioral Assessment
PSY 962, Seminar in Cognitive-Behavior Therapy
PSY 964, Development of Abnormal Behavior
PSY 971, Multicultural Issues in Counseling
PSY 976, Advanced Psychopathology

Note: Students who take PSY 961 and/or 962 are not required to take the lab associated with the courses. 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 960, Ethical and Professional Issues in Clinical Psychology
PSY 961, Seminar in Cognitive-Behavioral Assessment
PSY 961L, Cognitive-Behavioral Assessment Lab
PSY 962, Seminar in Cognitive-Behavior Therapy
PSY 962L, Cognitive-Behavior Therapy Lab
PSY 976, Advanced Psychopathology

Two of the following are required:
PSY 941, Applied Research Methods in Community Settings
PSY 942, Seminar in Community and Organizational Intervention
PSY 943, Seminar in Prevention
Practicum Requirements:
PSY 963, Practicum in Clinical Psychology

(minimum of 9 hours)

PSY 944, Practicum in Community Psych (3 hours)

A minimum of 6 hours of assessment courses from the following:
PSY 965, Special Issues in Psychological Assessment (may be repeated)
PSY 941, Applied Research Methods in Community Settings
PSY 943, Seminar in Prevention
PSY 942, Seminar in Community and Organizational Intervention
PSY 963, Practicum in Clinical Psychology (beyond 9 hours)

Additional Elective (Required): 3 graduate hours of the student's choice.

Internship: Prior to graduation but after admission to candidacy, all 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 programs.

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 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 536, Drugs and Human Behavior (3). General education further study course. A survey of the actions and effects of use of legal and illegal psychoactive drugs and of the use of prescription drugs in the treatment of psychological disorders. Details social-cultural, personal, and situational determinants and consequences of drug use and abuse. Prerequisite: PSY 111.
>PSY 526. Psychological Testing and Measurement (3). A critical analysis of the psychological foundations of tests and the interpretation of test findings. Surveys several tests representing the areas of intelligence, personality, normal and abnormal psychology, interests, special abilities, and aptitudes to illustrate general principles of testing. Prerequisite: PSY 111.

PSY 534. Psychology of Women (3). General education issues and perspectives course. 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. Aeroscpace 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 illnesses, 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. Prerequisite: 9 hours in the social sciences.

PSY 601. Systems and Theories in Psychology (3). Includes behaviorism, Gestalt psychology, and structuralism. Attempts to develop the logical relations of these theories to each other as well as to common historical themes and current issues. Prerequisite: 15 hours of psychology including PSY 411 or instructor's consent.

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 advisor 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, etc.

PSY 901. Graduate Research (1-3). Individual research. Graded S/U. Prerequisites: advisor's consent and graduate standing.

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 include 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 including AMOS, factor analysis, canonical correlation, 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. Accordingly, course 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. The course 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 functional 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). Graded S/U only. Repeatable for credit. Prerequisite: admission to candidacy and instructor's consent.

PSY 909. Pre-Proposal Research (1-3). A research course for students who have completed the 2nd-year project but have not taken qualifying examinations. Focuses on the first steps in developing a dissertation proposal. May be taken an unlimited number of times. Graded 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 386 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) applies 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 the 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 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/contexual 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 (4). 3R; 3L. 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. 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 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. 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/training of clinical psychologists; and how the practice of clinical psychology is governed and impacted by the APA Ethical Code, related laws and associated judicial rulings such as Tarasoff, and professional practice standards.

PSY 960. Seminar in Cognitive-Behavioral Assessment (3). Surveys standards used in evaluating 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 962. Seminar in Cognitive-Behavior Therapy (3). 3R; 3L. 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 963. Practicum in Clinical Psychology (1-3). Offers the student further experience in developing clinical skills. Students are supervised in their clinical work with individual clients seen through the department clinic, and/or other appropriate sites. Graded S/U only. May be repeated for credit. 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: instructor or department 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: instructor or department consent.

PSY 967. Individual Intelligence Assessment (3). This course is 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 (3). This course is 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). This course is 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). This course is 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). This course is 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 prejudice may affect their counseling effectiveness. Prerequisites: CESP 701, 803 or 804, or instructor's consent.

PSY 972. Techniques of Counseling (3). This course is 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). This course is 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). This course is 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). Graded S/U only. 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. Prerequisite: advisor's consent.

PSY 990. Seminar in Current Developments (3). Intensive study of current issues, techniques, research, and application. Repeatable for different topics for a maximum of 6 hours. 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 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.

Russian
See Modern and Classical Languages and Literatures.

Social Work (SCWK)
Graduate Faculty
Associate Professors: Brien Bolin, Linnea GlenMaye (director and graduate coordinator), Kathleen A. Lewandowski
Assistant Professors: Elvin Barrett, M.J. Hwang, Joanne Levine, Curtis Proctor

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 metropolitan 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 2007 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 cumulative undergraduate grade point average of 3.00 or better.
4. Have completed applications (to both the MSW program and the Graduate School) postmarked no later than February 1 for the following fall semester.

Non-academic Factors for Admission
Non-academic 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 letters of reference.

Admission Procedure
To be reviewed for admission, applicants should do the following:
1. Request an application packet from the School of Social Work.
2. Submit to the Graduate School the designated Application for Admission and supporting transcripts.
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 records 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 32 credit hours—29 credits comprising the advanced generalist curriculum and 3 credit hours for a bridge course to be taken during the summer before beginning the core curriculum. Students enrolling in the bridge course must be admitted to the Graduate School prior to course enrollment. Undergraduate students completing their bachelor’s degree during the summer must be enrolled in the course under the Graduate School Senior Rule option.

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 12-16 hours a semester, not counting summer semester. Applicants admitted for Advanced Standing enroll in two full-time semesters plus one 3-credit-hour summer bridge course. Applicants admitted into the part-time program must enroll in 6-9 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 advisor 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 course work or field practicum.
There will 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 56 credit hours—42 credits of classroom work and 14 credits of supervised practicum. The curriculum for the advanced standing program consists of 32 credit hours—24 credits of classroom work and 8 credits of supervised practicum. Students must maintain a 3.00 grade point average; a grade of C is the minimum passing grade.

Courses for Graduate/Undergraduate Credit

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 566. Perspectives on Self-Help Groups (3). Cross-listed as NURS 566 and PSY 566. Provides an interactive format that constitute 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 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 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 biol-psycho-social 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 on understanding change and empowerment strategies which further social justice in communities and organizations. Prerequisite: SCWK 710 or instructor’s consent.

SCWK 716. Social Welfare Development (3). Critical examination of the history of American social welfare institutions, policies, and the social work profession as a context for understanding contemporary social policy issues. Provides the knowledge and skills needed to effectively enact policy in practice with clients, and develop social policy both within their agencies and in the larger political arena. Students develop an appreciation for the profession’s ethical commitment to promote social justice and the general welfare of society and to improve social institutions to meet basic human needs. Prerequisite: Program approval.

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. Prerequisite: SCWK 716.

SCWK 720. Field Practicum I (3). Placement in community social welfare agencies for supervised periods of observation and direct service assignments emphasizing development of basic practice knowledge and skills. Includes developing an understanding of the social welfare agency and its role in the community service network. Corequisite: SCWK 700.

SCWK 721. Field Practicum II (3). Requires placement in community social welfare agencies for supervised periods of observation and direct service assignments emphasizing development of basic practice knowledge and skills. Promotes an understanding of the social welfare agency and its role in the community service network. Corequisite: SCWK 702.

SCWK 730. Graduate Topics in Social Work (1-3). Specialized instruction using a variable format in a social welfare relevant subject.

SCWK 731. Social Work and the Law (3). Students will develop an integrated, advanced generalist framework for interdisciplinary, advanced generalist practice within a legal setting. Students will 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 will 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 will develop skill in communicating with attorneys to enhance their effectiveness in resolving clients’ problems.

SCWK 750. 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 751. Fundamentals of Social Work Research (3). Provides an introduction to the components of quantitative research design and 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 methods employed in current social work research and the potential benefits of applying these research findings to social work practice. Prerequisite: Program approval.

SCWK 760. Advanced Standing Seminar (3). Builds upon the advanced standing student’s knowledge, experience, and skills by integrating social work theory, values, ethics, methodology, and literature. Based in the generalist perspective, prepares students for the advanced generalist practice course work in the MSW program.

SC WK 799, Directed Study (1-3). Individual study with a focus developed in collaboration with a departmental faculty member. Allows students to pursue and area of special interest. Repeatable for up to 6 credit hours. Prerequisite: departmental consent.

Courses for Graduate Students Only

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 I (3). Provides a critical examination of theories of practice relevant for advanced generalist practice across systems. Theories included address the biological, psychological, social, and spiritual dimensions of human behavior. Emphasizes theories applying to social work intervention with individuals, family systems, and small groups. Prerequisite: Program consent.

SCWK 817. Community Empowerment and Social Administration (3). Provides students with advanced generalist knowledge and skills for organizing and empowering communities and managing community-based organizations. Examines the history, strategies, and approaches relevant to community organizing. Focuses upon intervention and administrative skills to meet organizational and community needs. Emphasizes understanding the particular needs of minority communities. Prerequisite: Program consent.

SCWK 822. Field Practicum III (4). Placement in community social welfare 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 systematic 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. Family Therapy (3). Examines theoretical approaches to social work assessment and intervention with families. Reviews and evaluates various approaches to family therapy, and focuses on assessment and intervention with different types of families (e.g., differing levels of functioning, ethnicity, vulnerability, and oppression). Examines theoretical constructs, strategies for change, and use in actual social work intervention for such models of family therapy as structural, Bowenian, strategic, experiential, cognitive/behavioral, psychodynamic, and solution-focused.

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. Prerequisite: SCWK 751 or program consent.

SCWK 860. Advanced Generalist Practice II (3). Integrates social work theories, knowledge, and skills to develop each student’s framework for advanced generalist practice. Emphasizes applying social work theories in practice with populations at risk of violence. Develops skills in applying a wide array of social work roles within a multi-level practice environment. Prerequisite: SCWK 816.

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.

**Sociology (SOC)**

**Graduate Faculty**

*Associate Professors:* Twyla J. Hill, Charles S. Koeber, Kathleen O’Flaherty Perez, Ronald R. Matson (chairperson), David W. Wright (graduate coordinator)

*Assistant Professors:* Jodie L. Hertzog, 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) 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); 2) three letters of reference from professors who are familiar with the student’s undergraduate course work; and 3) 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 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).** *General education further study course.* 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).** *General education further study course.* 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).** *General education further study course.* 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, care giving, and intergenerational exchanges and relationships. Prerequisite: SOC 111 or GERO 100 or jr. 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 utilizing the common law. Prerequisite: SOC 111.

**SOC 534. Urban Sociology (3).** *General education further study course.* 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).** *General education further study course.* 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).** Explores the impact of an aging population on social institutions, covers the history of American aging policies and the organization and financing of health care for the elderly, and compares public approaches to responding to the needs of an increasingly diverse aging population. 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 111, instructor’s consent, and substantive area course.

**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
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 810. 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 students’ 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 non-thesis 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.

SOC 875-876. Thesis. (3-6). Spanish
See Modern and Classical Languages and Literatures.

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, 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
Distinguished Professor: W. Bartley Hildreth (Regents Distinguished Professor of Public Finance)
Professors: H. Edward Flentje (director, Hugo Wall School and Center for Urban Studies), Mark A. Glaser, Joseph P. Pisciotto, Samuel J. Yeager (graduate coordinator), John D. Wong
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 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 Master of Public Administration degree is designed for students to begin study in the fall semester. The deadline for applications for fall semester admission is April 1. Admission 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, applicants for the degree program must complete a graduate school application, meeting the following criteria: (1) completion of undergraduate degree from a regionally accredited college or university and (2) a grade point average of at least 3.0 (4.0 scale) 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).

Second, applicants must submit the following items to the graduate coordinator of the Hugo Wall School: (1) a letter of application outlining the 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 the student's work experience or academic performance.

Faculty will consider exceptions to the minimum grade point requirement (3.00 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 pre-service and in-service 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, The Environment of Public Administration
- 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 advisor. 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. Pre-service 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 Certificates

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 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 their 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 course or instructor’s permission.
- PADM 580. Workshop (3). Specialized instruction using variable format in relevant urban and public affairs subjects. Repeatable for credit up to 6 hours.
- PADM 560. 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: an advisor-approved methods class.
- 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). Cross-listed as CJ 651. Examines a range of topics including causation, typologies, communications, 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 utilizing 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 on the unique merit, equal employment opportunity, productivity, unionization, and collective bargaining problems found in the public sector.

PADM 745. The Environment of Public Administration (3). Surveys the political and governmental institutions that underlie the practice of public administration. Includes political systems, constitutional authority, legislative process, intergovernmental relations, and government regulation.

PADM 750. Public Administration Workshops (1-3). Specialized instruction using variable format 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). Explores 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 systems construction, maintenance, and replacement.

PADM 798. Independent Study (1-3). For graduate students to pursue research in areas not normally covered in course work. 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: an approved statistics class and an approved methods class.

PADM 865. State and Local Government Finance (3). Cross-listed as ECON 865 and POLS 885. 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 (3). This course is 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 utilization 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 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. Explores public management from the perspective of public purposes, policies, 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.

Women's Studies (WOMS)

Graduate Faculty

Associate Professors: Deborah Gordon, Ramona Liera-Schwichtenberg (chairperson), Chinyere Okarfor
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 communications. 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
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 studies 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 genre, 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 535. Literary Images of Women: Diverse Voices (3). Cross-listed as ENGL 535. Explores literature written in English by women of diverse ethnic, racial, class, and other backgrounds as well as of varying sexual orientations, ages, and degrees of physical ability. Analyzes materials as literary works and as expressions of women’s differences from one another. Works are selected based on their specific attention to the question of gender as it intersects with other elements of culture. Prerequisites: ENGL 101, 102, and one course in literature.

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. Genres 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). General education issues and perspectives course. 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 science.

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). General education issues and perspectives course. Examines the impact of gender and race on knowledge (understanding of objects, people, events, and activities). Assumes that gender, race, and knowledge are socially constructed categories. Concerned with science as a practice of representation. Focuses on the “white masculinist” ideas or beliefs that motivate and affect the practice of academic disciplines. Considers: What is the relationship between the making of masculinity and femininity and science? How are gender and race woven into science and social science and with what results? Does the entrance of white women and people of color into the sciences and humanities change how they are practiced? Do they produce significantly different understanding about the world? Central premise is that all knowledge emerges from some type of love or passion. What types of passion produce knower, knowing, and the known?
Graduate Faculty 2006-2007 (As of Jan. 1, 2006)

Full Membership

Date or dates following title refer to time of initial and successive appointments. Faculty listed have academic rank.

Abdinnour-Helm, Sue, Associate Professor Finance, Real Estate, and Decision Sciences (1998). BS, Birzeit University, 1983; MS, Southampton University, 1988; PhD, Indiana University, 1994.


Ahmed, Izramuddin, Assistant Professor, Mechanical Engineering (2000). BSME, Bangladesh University of Engineering and Technology, 1988; MSME, University of Texas-Austin, 1993; PhD, 1997.

Alltizer, Richard L., Assistant Professor, School of Accountancy (2001). BS, Central State University, 1980; MACC, University of Oklahoma, 1990; PhD, 1994.


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.

Badgett, Barry T., Associate Professor, School of Art and Design (1993). BFA, Virginia Commonwealth University-Richmond, 1968; MFA, Syracuse University, 1990.

Bagai, Rajiv, Associate Professor and Chairperson, Computer Science (1990). MS, Birla Institute of Technology and Science, 1983; MS, University of Victoria, 1987; PhD, 1990.

Bahar, Behnam, Professor and Chairperson, Counseling, Educational, and School Psychology (1985). BA, Northern Michigan University, 1960; MS, Utah State University, 1979; EdD, Boston University, 1983.


Bannister, Anda, Associate Professor, School of Community Affairs, Criminal Justice Program (1995). BS, University of Illinois, Champaign-Urbana, 1989; MA, Indiana University, Bloomington, 1990; PhD, Michigan State University, 1995.


Beehler, John M., Professor, School of Accountancy, and Dean, W. Frank Barton School of Business (2000). BS, Pennsylvania State University, 1977; MBA, Indiana University, 1982; PhD, 1988.

Beehler, Pamela, Chairperson and Associate Professor, Kinesiology and Sport Studies (2000). BS, Pennsylvania State University, 1977; MEd, East Stroudsburg University, 1980; PhD, Indiana University 1986.

Bees, Julie L., Professor and Graduate Coordinator, School of Music (1986). BM, Peabody Conservatory, 1974; DMA, University of Colorado, Boulder, 1982.

Begg, Donald L., President and Professor of Education (1999). BSE, Southern Illinois University, 1963; MEd, 1964; PhD, University of Iowa, 1966.


Bereman, Nancy, Professor and Chairperson, Management (1980). BA, Wichita State University, 1969; MBA, 1974; PhD, University of Minnesota, 1983.

Bernstorf, Elaine D., Associate Dean and Professor, College of Fine Arts (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.

Birzer, Michael Lee, Assistant Professor, Criminal Justice (1996). BS, Wichita State University, 1980; MAJ, 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.


Bolin, Brien L., Associate Professor, School of Social Work (1999). Interim Director, Center for Teaching Research and Excellence. 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.


Boyle, Michael Patrick, Assistant Professor, Elliott School of Communication (2004). BA, East Stroudsburg University, 1997; MA, University of Wisconsin at Madison, 2001; PhD, University of Wisconsin at Madison, 2004.

Brady, Stephen W., Associate Professor, Mathematics and Statistics, and College Algebra Program Director (1967). AB, Indiana University, 1963; AM, 1965; PhD, 1968.

Bravo-Elizondo, 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, Biological Sciences (1982). BA, Miami University-Oxford, Ohio, 1974; MS, 1976; PhD, University of Georgia, 1981.

Bryant, Jeffrey J., Director and Associate 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.


Burke, Collette E., Associate Professor and Berg Fellow, Geology (1983). BA, St. Mary of the Woods College, 1972; MS, Akron University, 1981; PhD, University of Wisconsin-Milwaukee, 1983.


Carroll, Anne, Associate Professor, English (1998). BME, University of Michigan, 1989; MA, University of Maryland, 1994; PhD, 1999.
Carroll, Jeri A., Professor, Curriculum and Instruction (1982); BME, University of Kansas, 1965; MS, 1973; PhD, 1980.

Carruthers, Silvia Herzog, Associate Professor, Music History/Literature (1997). BA, Northwestern 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.

Cetinkaya, Coskun, Assistant Professor, Electrical and Computer Engineering (2003). BS, Anadolu University, 1994; MS, University of Southern California, 1998; PhD, Rice University, 2002.

Chaparro, Alex, Associate Professor, Psychology (1996). BS, Florida Institute of Technology, Melbourne, 1984; PhD, Texas Tech University, 1990.

Chaparro, Barbara, Assistant Professor and Director of SURL, Psychology (1998). BS, University of Richmond, Virginia, 1985; PhD, Texas Tech University, 1990.

Cheng, Jen-Chi, Associate Professor and Chairperson, Economics and Barton Fellow (1989). BA, National Chengchi University, 1978; MA, National Taiwan University, 1982; PhD, Vanderbilt University, 1989.

Cheraghi, Seyed H., Professor and Chairperson, Industrial and Manufacturing Engineering (1993). BA, Tehran University, Iran, 1978; MS, University of Arizona, 1987; PhD, Pennsylvania State University, 1992.


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.

Chou, Shang-Ching, Professor, Computer Science (1991). BS, Shanghai Teacher's College (China), 1965, MS, University of Texas at Austin, 1984; PhD, 1985.

Christ, Ronald, Professor, 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, Associate Director, Center for Economic Education 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., Associate 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 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 and Director, School of Community Affairs, Criminal Justice Program (1996). BA, Sam Houston State University, 1966; MA, 1967; MPA, Texas Christian University, 1979; PhD, Florida State University, 1986.

Crums, 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.

Dattner, Darce, Assistant Professor, Psychology (2000). BS, St. Ambrose University, 1995; MS, Texas Christian University, 1998; PhD, 2000.


Dawne, Margaret Haughton, Associate Professor and Chairperson, English (1993). BA, University of Virginia, 1979; MS, Northwestern University, Evanston, 1980; MFA, City University of New York, Brooklyn College, 1989.


DeSilva, Dharma, Professor, International Business and Management, Rudd Foundation Fellow, and Director of the Center for International Business Advising (1976). BA and BS, University of Evansville, 1957; MS, Illinos University, 1959; PhD, Indiana University, Bloomington, 1966.

DiLollo, Anthony, Assistant Professor, Communication Sciences and Disorders (2003). BS, University of Western Australia, 1986; MS, University of Mississippi, 1996; PhD, University of Memphis, 2001.

Dioloy, Patricia, Associate Professor and Graduate Coordinator, Elliott School of Communication (1997). BA, University of Minnesota, 1975; MA, 1993; PhD, 1994.


Driessen, Brian J., Assistant Professor, Mechanical Engineering (2004). BS, Louisiana Technical University, 1991; MS, Georgia Institute of Technology, 1993; PhD, 1996.

Dreifort, John E., Professor and Graduate Coordinator, History (1970). BS, Bowling Green State University, 1965; MA, 1966; PhD, Kent State University, 1970.


Eichhorn, David, Associate Professor, Chemistry, and Interim Associate Dean, Graduate School (1999). Harvard University, Cambridge, 1986; PhD, University of California, Berkeley, 1992.


Farmer, Steven M., Associate Professor, Management and 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., Assistant Professor, Physics (2000). BS, Wichita State University, 1990; MS, 1992; PhD, University of Kentucky, 1997.

Flentje, H. Edward, Professor and Director, Hugo Wall School of Urban and Public Affairs (1979). BS, Emporia State University, 1964; MA, George Washington University, 1965; PhD, University of Kansas, 1970.

Foley, Mark, Associate Professor, 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). BSE, University of Kansas, 1961; MSE, 1963; MFA, 1971.

Fox, Charles, Associate Dean and Associate Professor, College of Health Professions (2003). PhD, Brandeis University, 1986.


Gibson, Kay, Associate Professor, Curriculum and Instruction (1998). BA, Wichita State University, 1970; MS, 1984; PhD, University of New England, 1996.


Gries, John C., Associate Professor and Chairperson, Geology (1971). BS, University of Wyoming, 1962; MS, 1965; PhD, University of Texas, 1970.


Gythiel, Anthony P., Professor, History (1971). Diplome d’Humanites, St. Stanislaus Poppenwe, 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.

Halcomb, Charles G., Professor, Psychology (1990). BA, Oklahoma Baptist University, 1958; PhD, Baylor University, 1964.

Hale, LaDonna S., Associate Professor, Physician Assistant (1998). BS, University of Kansas, 1995; PharmD, 1996.


Harrison, Paul, H. Dene Heskett Chair 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 (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, Alternative Certification Program (2005). BS, Friends University, 1995; MEd, Wichita State University, 1997; PhD, Kansas State University, 2004.

Hayes, Karen, Assistant Professor, School of Nursing (1996). BS, University of Virginia, 1974; MSN, University of Kansas, 1979; PhD, University of Missouri, Columbia, 1996.

Headley, Dean, Associate Professor and Chairperson, 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, Biological Sciences (1992). BA, Northeastern University, 1974; MA, 1978; PhD, Clark University, 1982.

Hersch, Philip L., Professor, Economics (1983). BA, Queens College, 1974; MA, Ohio State University, 1978; PhD, 1982.

Hershfield, Jeffrey, Associate Professor, Philosophy (1999). BA, University of British Columbia, 1982; MA, University of Arizona, 1985; PhD, 1992.


Ho, James C., Distinguished Trustees Professor, Physics, and Senior Staff Scientist, National Institute for Aviation Research (1971). BS, National Taiwan University 1959; MS, University of California at Berkeley, 1963; PhD, 1966.


Hoffmann, Klaus A., Marvin J. Gordon Distinguished Professor, Aerospace Engineering (1990). BS, University of Texas at Austin, 1972; MS, 1975; PhD, 1983.


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.


Huxman, Susan M., Associate Professor and Chairperson, Elliott School of Communication (1990). BA, Bethel College, 1982; MA, University of Kansas, 1986; PhD, 1988.

Iorio, Sharon H., Professor and Associate Dean, Fairmount College of Liberal Arts and Sciences (1990). BA, University of Oklahoma, 1965; MS, Oklahoma State University, 1984; PhD, 1991.


Jeffres, Thalia D., Assistant Professor, Mathematics (2004). BA, Johns Hopkins University, 1985; MA, Dartmouth, 1987; PhD, SYNY at Stonybrook, 1996.

Jewell, Ward T., Professor, Electrical and Computer Engineering (1987). BSEE, Oklahoma State University, 1979; MSEE, Michigan State University, 1980; PhD, Oklahoma State University, 1986.

Johnson, Judith R., Associate Professor and Chairperson, History (1988). BS, University of Maryland, 1964; MA, University of New Mexico, 1983; PhD, 1987.

Jorgensen, Michael J., Assistant Professor, Industrial and Manufacturing Engineering (2001). BS, University of Nebraska, 1986; MS, 1989; PhD, Ohio State University, 2000.


Keshavanarayana, Suresh Raju, Assistant Professor, Aerospace Engineering (1995). BS, Bangalore University, India, 1992; MS, Wichita State University, 1997; PhD, 2001.

King, Marie Allyn, Associate Professor, Music Theatre-Voice, and Director, Opera/ Musical Theatre (1997). BFA, Florida Atlantic University, 1972; Artists Diploma, University of Cincinnati College-Conservatory of Music, 1997; MFA, 1998.

Klunder, Willard Carl, Associate Professor, History (1986). BA, Saint Olaf College, 1969; AM, University of Illinois, Urbana-Champaign, 1972; PhD, 1981.

Koeber, Charles S., Associate Professor, Sociology (1999). BA, University of Wyoming, 1991; MA, 1993; PhD, Binghamton University, 1999.

Koert, David N., Associate Professor and Bombardier-Lejet Fellow, Mechanical Engineering (1993). BSME, Villanova University, 1980; MSME, Drexel University, 1984; PhD, 1990.

Kovar, Susan K., Professor, Kinesiology and Sport Studies, and Dean, Graduate School (1991). BS, University of Nebraska, 1967; MS, University of Illinois, 1970; PhD, University of Minnesota, 1985.

Krishnan, Krishna, Bombardier-Lejet Fellow and Associate Professor and Graduate Coordinator, Industrial and Manufacturing Engineering (1996). Kerala University, India, 1994; MS, Virginia Polytechnic Institute and State University, 1991; PhD, 1994.


Lancaster, Kirk E., Professor, Mathematics and Statistics (1980). AB, Humboldt State University, 1975; PhD, Oregon State University, 1981.


Leever-Davis, Shirley, Professor and Chairperson, Curriculum and Instruction (2005). BS, Kansas State University, 1984; MSEd, Kansas State University, 1988; PhD, Kansas State University, 1991.


Lewis, D. Kathleen, Associate Professor, Physical Therapy (1999). BS, University of Minnesota; BS, Kansas State University; MA, University of Southern California-Los Angeles; JD, Washburn Law School.

Lewis, Rhonda, Associate Professor, Psychology (1996). BA, Wichita State University, 1991; MA, University of Kansas, 1993; MPH, 1996; PhD, 1996.


Locke, James E., Associate Professor, Aerospace Engineering (2000). BSCE, Oklahoma State University, 1981; MSCE, 1983; PhD, Old Dominion University, 1988.

Loftus, Ariel, Associate Professor, History (1997). BA, University of Michigan, 1979; PhD, Stanford University, 1981; MA University of Michigan, 1982.

Longhofer, Stanley D., Associate Professor and Director, Finance, Real Estate, and Decision Sciences, and Stephen L. Clark Chair in Real Estate and Finance (1999). BBA, Wichita State University, 1989; MS, University of Illinois, 1991; PhD, 1995.

Loper, Gerald D., Jr., Associate Vice President for Research, Director of the Office for Research Administration, and Associate Professor, Physics (1964). BA, Wichita State University, 1959; MS, Oklahoma State University, 1962; PhD, 1964.


Ma, Chunsheng, Associate Professor, Mathematics and Statistics (1999). BS, Wukan Teachers College at Xiaogang, China, 1981; MS, Wukan University, China, 1988; PhD, University of Sydney, Australia, 1997.

Ma, Daowei, Professor, Mathematics and Statistics (1993). MS, Wukan University, China, 1982; PhD, Washington University-St. Louis, 1990.

Madhavan, Viswanathan, Associate Professor, Industrial and Manufacturing Engineering (1996). B Tech, Indian Institute of Technology, Madras, India, 1991; MS, Purdue University, 1993; PhD, 1996.

Malzahn, Don E., Professor, Industrial and Manufacturing Engineering (1973). BS, Oklahoma State University, 1968; MS, 1969; PhD, 1975.


Masud, Abu S.M., Professor and Associate Dean, College of Engineering (1980). BS, Bangladesh University of Engineering and Technology, 1969; Diploma Institute of Business Administration, 1973; MSIE, Kansas State University, 1975; PhDIE, 1978.


May, Jeffrey, Associate Professor, Biology (2003). BS, University of Maine, 1970; PhD, University of Rhode Island, 1978.


McConnell, Daniel S., Assistant Professor, Psychology (2001). BA, Indiana University, 1992; PhD, 1999.

McDonald, J. David, Professor and Chairperson, 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.


Miles, William, Associate Professor, Economics (1999). BS, Bentley College, 1993; PhD, University of Illinois at Urbana-Champaign, 1999.


Miller, Lori K., Professor Kinesiology and Sport Studies and Associate Dean, College of Education (1996). BS, Emporia State University, 1984; MEd, Texas A&M University, 1986; EdD, East Texas State University, 1989; MBA, University of Louisville, 1993.

Miller, Rodney E., Professor and Dean, 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.


Moore-Jansen, Peer, Associate Professor and Chairperson, Anthropology, and Associate Professor, Criminal Justice (1989). BA, Texas Technological University, 1977; MA, University of Arkansas, Fayetteville, 1982; PhD, University of Tennessee, Knoxville, 1989.


Muma, Richard D., Associate Professor and Chairperson, Physician Assistant (1994). BS, University of Texas Medical Branch-Galveston, 1987; MPH, University of Texas School of Public Health, 1993; PhD, University of Missouri at St. Louis, 2004.

Murdock, Katherine, Professor, School of Music (1985). BA, Humboldt State University, 1971; BA, 1977; MA, San Francisco State University, 1980; PhD, Eastman School of Music, University of Rochester, 1986.


Nagati, M. Gawad, Associate Professor, Aerospace Engineering (1984). BS, Cairo University, Egypt, 1966; MS, Wichita State University, 1975; PhD, Iowa State University, 1984.

Nance, Donald W., Associate Professor and Director, Counseling Service (1968). BA, University of Redlands, 1964; MA, University of Iowa, 1967; PhD, 1968.

Namuduri, Kameswara, Assistant Professor, Electrical and Computer Engineering (2002). BS, Osmania University, 1984; MS, Central University, 1986; PhD, University of South Florida, 1992.

Okafor, Chinnyere, Associate 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; MA, City University of New York, 1974; PhD, University of Pittsburgh, 1980.


Parcell, William C., Assistant Professor, Geology (2001). BS, University of the South, 1994; MS, University of Delaware, 1997; PhD, University of Alabama, 2000.


Patterson, Jean, Associate Professor, 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, Kinesiology and Sport Studies (2005). BS, Linfield College, 1995; Graduate Diploma, Victoria University, 1997; MAS, 2002; PhD, 2004.

Pendse, Ravindra, Associate Vice President, Academic Affairs and Research and Chief Information Officer; Associate Professor, Electrical and Computer Engineering and CISCIO Fellow (1994). BSEE, Osmania University, India, 1982; MSEE, Wichita State University, 1985; PhD, 1994.

Peel, Martin M., Professor, Economics and Bloomfield Foundation Faculty Fellow in Business (1965). BA, Arizona State University, 1960; MA, Ohio State University, 1962; PhD, 1965.

Peters, Steven J., Associate Professor and Chairperson, School of Performing Arts (2003). BA, Ouauchita Baptist University, 1972; MA, Baylor University, 1975; PhD, Texas Tech University, 1986.


Pickus, Keith, Associate Dean, Liberal Arts and Sciences; Associate Professor, History (1995). BA, University of Washington, 1983; MA, 1988; PhD, 1993.


Pitetti, Kenneth H., Professor, Physical Therapy (1987). BS, University of San Francisco 1968; MS, Ft. 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; MME, Indiana University, 1960; MFA, University of Iowa, 1967; PhD, 1969; MHL (Honorary Degree), Ottawa University, 1979.

Porter, Stephen S., Associate Professor, Marketing and Entrepreneurship and Barton Fellow (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.

Prufur, Keith M., Assistant Professor, Anthropology (2004). BA, Cleveland State University, 1994; MA, Southern Illinois University at Carbondale, 1966; PhD, 2002.


Quantic, Diane D., Associate Professor, English, and Director, Writing Program (1973). BA, Kansas State University, 1962; MA, 1966; PhD, 1971.

Quirin, Jeffrey J., Associate Professor and Grant Thornton Faculty Fellow, School of Accountancy (2000). BS, Pittsburg State University, 1994; MBA, 1995; PhD, University of Nebraska-Lincoln, 1998.


Reed, Paul E., Associate Professor, School of Music (1966). BM, Drake University, 1956; MM, 1957.

RIMMINGTON, GLYN M., Boeing Professor of Global Learning (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.

ROBARCHEK, CLAYTON A., Professor, Anthropology (1985). BA, University of Nebraska, 1970; PhD, University of California, 1977.

ROBERTSON, JOHN W., Assistant Professor, Mathematics and Statistics (2004). BS, Brigham Young University, 1993; PhD, University of Michigan, 2000.


ROGERS, MICHAEL E., Associate Professor, Kinesiology and Sport Studies (1998). BS, Mount Union College, 1991; PhD, Kent State University, 1996.


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.


SCHNEIDER, PHILIP H., Professor and Director of Creative Writing, English (1967). BA, State University of New York College at Oneonta, 1965; MFA, University of Iowa, 1967.


SCUDDER, ROSALIND R., Professor, Communication Sciences and Disorders (1972). BA, Wichita State University, 1964; MA, 1972; PhD, 1978.

SHAW, CAROLYN M., Assistant Professor, Political Science (2001). BA, Dickinson College, 1991; PhD, University of Texas-Austin, 2000.

SHAFFER, VICTORIA, Assistant Professor, Psychology (2005). BA, West Chester University, 2000; MA, The Ohio State University, 2002; PhD, 2005.


Smith, Bert L., Professor, Aerospace Engineering (1966). BSME, University of Missouri at Rolla, 1953; MSME, 1960; PhD, Kansas State University, 1966.

Smith, Martha, Professor, 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-Campbell, Betty, Associate Professor, School of Nursing (1998). Nursing Diploma, Hurley Medical Center School of Nursing, 1973; BSN, University of Michigan, 1998; MN, University of Kansas, 1987; PhD, University of Colorado, 1996.


Snyder, Nancy M., Associate Vice President, Academic Affairs and Research, Director of HLC Reaccreditation, and Associate Professor, Hugo Wall School of Urban and Public Affairs (1977). AB, Clarke College, 1970; MS, Southern Illinois University, 1973; PhD, 1977.

Soles, David E., Professor and Chairperson, Philosophy; Director, MA in Liberal Studies Program (1974, 1982). BA, University of Pittsburgh, 1969; PhD, Johns Hopkins University, 1977.


Steck, James E., Professor and Bombardier-Learjet Fellow, Aerospace Engineering (1990). BS, University of Missouri at Rolla, 1980; MS, 1984; PhD, 1989.

Steinke, Elaine, Professor, School of Nursing (1990). BSN, Wichita State University, 1979; MN, 1982; PhD, Kansas State University, 1987.


Stratman, Katherine H., Assistant Professor and Clinical Supervisor, Communication Sciences and Disorders (1985). BA, Midland Lutheran College, 1970; MA, Wichita State University, 1971; PhD, 2001.


Talaty, Erach R., Professor and Assistant Chairperson, Chemistry (1969). BSc (Honors), Nagpur University, India, 1948; PhD, 1954; PhD, Ohio State University, 1957.


Thomas, Phillip D., Professor, History (1965, 1984). BA, Baylor University, 1960; MA, University of New Mexico, 1964; PhD, 1965.


Torbenson, Craig L., Associate Professor, History (1989). BS, Brigham Young University, 1982; MA, 1985; PhD, University of Oklahoma, 1992.
Tran, Anh, Assistant Professor, Curriculum and Instruction (2003). BA, Saigon University, 1973; MA, Wichita State University, 1993; PhD, Kansas State University, 2002.


Türk, Randall L., Associate Professor, Educational Leadership (1994). BS, Butler University, 1965; MEd, Seattle University, 1988; PhD, Texas A&M University, 1994.


Van Stipdonk, Michael J., Associate Professor, Chemistry (2000). BA, University of Detroit, 1989; PhD, Texas A&M University, 1994.

Waters, Mary Ann, Assistant Professor, English (2004). BA, Millsville 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 (1999). BSET, Oklahoma State University, 1984; MSiEM, 1986; PhD, University of Texas-Arlington, 1999.


Williamson, Keith L., Associate Professor, Elliott School of Communication (1977). BA, Wichita State University, 1965; MTH, Southern Methodist University, 1968; PhD, Temple University, 1975.


Withrow, Brian, Associate Professor, School of Community Affairs, Criminal Justice Program, and Director, Midwest Criminal Justice Institute (1999). BA, Stephen F. Austin State University, 1981; MFA, Southwest Texas State University, 1993; PhD, Sam Houston State University, 1999.


Wong, John D., Professor, Hugo Wall School of Urban and Public Affairs (1990). BBA, Wichita State University, 1982; MA, 1984; JD, Washburn University, 1986; PhD, Northeastern University, 1990.


Wright, David W., Associate Professor and Graduate Coordinator, Sociology, (1993). BA, Indiana University-Purdue University at Indianapolis, 1987; MA, Purdue University, 1989; PhD, 1992.

Yang, C. Charles, Associate Professor, Mechanical Engineering (1997). BS, National Taiwan University, 1985; MS 1987; PhD, Louisiana State University, 1993. Licensed Professional Engineer—Louisiana.

Yang, Wan, Associate Professor, Geology (1999). BS, Northwestern University, China, 1984; MS, California State University at Fresno, 1990; PhD, University of Texas at Austin, 1995.


Yotits, Catherine, Associate Professor, Curriculum and Instruction (2003). BS, Michigan State University, 1963; MS, Purdue University, 1973; PhD, 1978.

Yildirim, Mehmet, Assistant Professor, Industrial and Manufacturing Engineering (2002). BS, Bogazici University, 1994; MS, Bilkent 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.

Akrapova, Maria G., Assistant Professor and Graduate Coordinator, Modern and Classical Languages (2003). MA, Sofia University, Bulgaria, 1995; PhD, University of Kansas, 2004.

Anderson, Les W., Associate Professor and Associate Director, Elliott School of Communication (1977). BA, Fort Hays State University, 1970; MA, University of Missouri, 1971.

Baabich, Judith, Professor, School of Performing Arts (1984). BA, Edgefield College, 1974; MA, University of Cincinnati, 1976; PhD, University of California, 1981.

Bann, James Gerald, Assistant Professor, Chemistry (2004). BS, Fort Lewis College, 1993; PhD, Oregon Health Science University, 2000.


Barut, Mehmet, Assistant Professor, Finance, Real Estate, and Decision Sciences (2000). BS, Istanbul Technical University, 1988; MS, 1991; PhD, Clemson University, 1999.

Bates, Rodney, Assistant Professor and Graduate Coordinator, Computer Science (2000). BS, Kansas State University, 1967; MS, 1968; PhD, 1971. Beldona, Srimat (Sam), Associate Professor, Management, and Assistant Director, Center for International Business (2001). BS, Karnataka University, 1983; MBA, 1985; MS, Temple University, 1992; PhD, 1994.

Bethune, Rodney, Assistant Professor, Finance, Real Estate, and Decision Sciences (2004). BA, Texas A & M, 1984; MBA, Baylor University, 1993; PhD, University of Houston, 1998.

Cavarozzi, Joyce P., Associate Professor, School of Performing Arts (1965). BSE, Ohio University, 1953; MA, Ohio State University, 1963.


Chang, Doris, Assistant Professor, Women’s Studies (2003). BA, University of North Carolina-Chapel Hill, 1992; MA, Bowling Green State University, 1994; PhD, Ohio State University, 2002.


Cochran-Black, Diana L., Assistant Professor, Medical Technology (1987). BS, Emporia State University, 1979; MHS, Wichita State University, 1986; DrPh, University of Oklahoma, 1998.

Corrigan, Mary, Assistant Professor, School of Community Affairs, and Program Director, Gerontology Program (2002). BS, Kansas State University, 1981; MA, 1983; PhD, 1987.
1973; MA, Wichita State University, 1978; PhD, Virginia Commonwealth University, 2002.


Day, David, Assistant Professor and Assistant Director, Physician Assistant (1997). AAS, Seward County Community College, 1987; BS, Wichita State University, 1995; MPAS, University of Nebraska, 1999.

Depledge, Gordon, Assistant Professor, Finance, Real Estate, and Decision Sciences (2004). BBA, Georgia State University, 1985; MBA, Emory University, 1986; MS, Georgia State University, 1996; PhD, 2004.


Elder, Betty, Assistant Professor, Nursing (2003). BA, Wichita State University, 1974; BSN, University of Missouri–KC, 1999; MS, University of Nebraska-Omaha, 2001.

Flippen, Paul, Assistant Professor, Art and Design (2002). BA, University of Texas-Austin, 1995; BFA, 1995; MS, Pratt Institute, 2000; MFA, 2000.

Forlaw, Loretta, Assistant Professor, School of Nursing (2001). BSN, Pacific Lutheran University, 1975; MSN, University of California-San Francisco, 1976; DNS, Catholic University of America, 1992.

Fowler, Thomas A., Associate Professor and Associate Chairperson, School of Music; Interim Associate Dean, College of Fine Arts (1979). BME, Wichita State University, 1968; MME, 1979.


Griffin, Audrey, Assistant Professor and Clinical Supervisor, Physician Assistant, 2002. BS, Wichita State University, 1999; MPAS, University of Nebraska, 2003.


Hager, Kevin, Associate Professor, Elliott School of Communication (1998). BA, Fort Hays State University, 1982; MS, 1983.


Hellman, James, Associate Professor and Acting Associate Dean, School of Art and Design (1989). BA, Wichita State University, 1972; MA, 1975.

Hertzog, Jodie, Assistant Professor, Sociology (2003). BS, Grand Valley State University, 1994; MA, Western Michigan University, 1997; PhD, Purdue University, 2003.


Ho, Lop-Hing, Associate Professor, Mathematics and Statistics (1989). BA, Chinese University of Hong Kong, 1979; MA, Princeton University, 1982; PhD, 1984.


Jacovetta, Ronald G., Associate Professor, School of Community Affairs, Criminal Justice Program (1973). BS, Colorado State University, 1965; MS, 1967; PhD, University of Connecticut, 1972.


LeZotte, Annette, Assistant Professor, School of Art and Design (2000). BA, University of Illinois-Champaign-Urbana, 1992; MA Florida State University, 1995.

Liu, Chang, Assistant Professor, Communication Sciences and Disorders (2004). BS, Peking University, 1997; PhD, Indiana University, 2002.


Muthitcharoen, Achita, Assistant Professor, Finance, Real Estate, and Decision Science (2002). BA, Thammasat University, 1994; MBA, University of Memphis, 1997; PhD, 2002.


Pelkowski, Jodi, Assistant Professor, Economics (2002). BA, Coe College, 1995; MS University of Kentucky, 1999; PhD, 2000.

Perez, Kathleen O., Associate Professor, Sociology (1983). BA, Clarke College, 1979; MA, Miami University, 1980; PhD, Purdue University, 1984.

Pett, Timothy L., Director, Center for Entrepreneurship, Hays Company Faculty Fellow in Business and Associate Professor, Management (1996). BA, Saint Leo College, 1989; MBA, University of Memphis, 1992; PhD, 1998.

Pierce, Dalphia, Assistant Professor, Curriculum and Instruction (2003). BA, Texas Tech University, 1972; Med, University of Houston, 1982; EdD, 1986.


Sanatullov, Marat E., Assistant Professor and Teacher Education Coordinator, Modern and Classical Languages and Literatures (2004). License, University of Pottiers, France; Maitrise, 1998; MA, University of Nebraska, 2000.


Self, Patricia L., Assistant Professor, Communication Sciences and Disorders (1994). BA, Wichita State University, 1984; MA, 1985; PhD, 1991.

Shawver, Martha M., Assistant Professor, Nursing, and Associate Vice President, Academic Affairs and Research (1975). BSN, Eastern Mennonite College, 1965; MA in Nursing, University of Iowa, 1974; PhD, University of Kansas, 1985.

Sheffield, James E., Associate Professor, Political Science (1974). BA, Mississippi State University, 1969; MS, Florida State University, 1970; PhD, 1973.


Soschinske, Kurt, Assistant Professor, Mechanical Engineering (1999). BS, University of Wisconsin, Madison, 1980; MS, 1983; PhD, Wichita State University, 1997.
Starkey, Linda, Assistant Professor, School of Music and Associate Director of the Musical Theatre Opera Programs (1993). BME, University of Kansas, 1968; MM, Fort Hays State University, 1972; MA, Wichita State University, 1997.

Stene, Gregory Scott, Assistant Professor, Elliott School of Communication (2004). BA, University of Colorado at Colorado Springs; MA, University of Colorado at Boulder, 1982; PhD, 1997.

Taher, Syed M., Associate Professor, Physics (1976). BS, Dacca University, 1964; MS, 1966; MA, California State University, Long Beach, 1970; PhD, Washington State University, 1974.

Tate, Juanita S., Associate Professor and Chairperson, School of Nursing, and Associate Dean, College of Health Professions (1999). BS, University of Missouri, 1960; MS, Washington University, 1965; Certificate in Gerontology, University of Denver, 1982; PhD, 1984.

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.


Uhing, Brad M., Assistant Professor, Curriculum and Instruction (2005). BSEd, University of Nebraska – Lincoln, 1997; MEd, 2000; PhD, 2005.

Vanderburgh, William L., Assistant Professor, Philosophy (2001). BA (Hons), University of Western Ontario, 1993; MA, 1994; PhD, 2001.


Widener, Russell D., Associate Professor, School of Music, and Coordinator, General Education Program (1981). BM, Baylor University, 1968; MM, Catholic University, 1972.

Wilson, Camilla, Associate Professor and Chairperson, Physical Therapy (2003). BS, University of Kansas, 1970; MS, 1979; PhD, 1992.


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.
Wichita State University Map and Building Abbreviations

**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-86 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 or 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.

<table>
<thead>
<tr>
<th>Abbrev.</th>
<th>NAME</th>
<th>Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>AL</td>
<td>Ablah Library</td>
<td>D</td>
</tr>
<tr>
<td>AH</td>
<td>Ahlberg Hall</td>
<td>C-D</td>
</tr>
<tr>
<td></td>
<td>• College of Health Professions</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Student Health Services</td>
<td></td>
</tr>
<tr>
<td>AR</td>
<td>Aviation Research, National Institute for</td>
<td>D-E</td>
</tr>
<tr>
<td>BH</td>
<td>Blake Hall (KMUW-FM)</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td>(South of RSC)</td>
<td>C</td>
</tr>
<tr>
<td>BA</td>
<td>Brennan I</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td>Campus Activities Center (CAC)</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td>See Rhatigan Student Center (RSC)</td>
<td></td>
</tr>
<tr>
<td>CA</td>
<td>CAC Theater</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td>Wheelchair entry possible at side (east) door</td>
<td></td>
</tr>
<tr>
<td>CD</td>
<td>Child Development Center, University</td>
<td>A</td>
</tr>
<tr>
<td>CH</td>
<td>Clinton Hall</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td>New wheelchair ramp on southwest corner</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• W. Frank Barton School of Business</td>
<td></td>
</tr>
<tr>
<td>CE</td>
<td>Corbin Education Center</td>
<td>D</td>
</tr>
<tr>
<td></td>
<td>• College of Education</td>
<td></td>
</tr>
<tr>
<td>CU</td>
<td>Credit Union</td>
<td>C</td>
</tr>
<tr>
<td>DH</td>
<td>Devlin Hall</td>
<td>C-D</td>
</tr>
<tr>
<td>DA</td>
<td>Duerksen Fine Arts Center</td>
<td>A-B</td>
</tr>
<tr>
<td></td>
<td>Wheelchair entry possible but not at every entrance</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• School of Music and Miller Concert Hall</td>
<td></td>
</tr>
<tr>
<td>ES</td>
<td>Eck Stadium (Tyler Field)</td>
<td>E</td>
</tr>
<tr>
<td>EB</td>
<td>Engineering Building</td>
<td>D-C</td>
</tr>
<tr>
<td>EH</td>
<td>Elliott Hall</td>
<td>D-C</td>
</tr>
<tr>
<td>FC</td>
<td>Fairmount Commons</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>Single story building facing Hillside. Park across street in arena parking lot</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fairmount Towers</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>2221 N. Hillside. Wheelchair ramp exist but not at every entrance</td>
<td></td>
</tr>
<tr>
<td>FH</td>
<td>Fiske Hall</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td>Wheelchair entry very difficult: No elevator</td>
<td></td>
</tr>
<tr>
<td>GA-GD</td>
<td>Gaddis Physical Plant Complex</td>
<td>D-E</td>
</tr>
<tr>
<td>GE</td>
<td>Geology Building</td>
<td>C-D</td>
</tr>
<tr>
<td></td>
<td>Golf Course</td>
<td>E-F</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Abbrev.</th>
<th>NAME</th>
<th>Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>GI</td>
<td>James S. Garvey International Center</td>
<td>A-B</td>
</tr>
<tr>
<td>GR</td>
<td>Grace Memorial Chapel</td>
<td>C</td>
</tr>
<tr>
<td>GW</td>
<td>Grace Wilkie Hall</td>
<td>D</td>
</tr>
<tr>
<td></td>
<td>• Career Services</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Cooperative Education</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Counseling and Testing Center</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Liberal Arts and Sciences Advising Center</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Office of Disability Services</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Student Affairs</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Student Support Services</td>
<td></td>
</tr>
<tr>
<td>HG</td>
<td>Henion Hall (No elevator)</td>
<td>B-C</td>
</tr>
<tr>
<td>HC</td>
<td>Heskett Center</td>
<td>D</td>
</tr>
<tr>
<td>HH</td>
<td>R. Dee Hubbard Hall</td>
<td>C</td>
</tr>
<tr>
<td>HR</td>
<td>Human Resources Center</td>
<td>C</td>
</tr>
<tr>
<td>IA</td>
<td>Intensive English Language Center Annex</td>
<td>A</td>
</tr>
<tr>
<td>JB</td>
<td>Jabara Hall</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td>• Computing Center</td>
<td></td>
</tr>
<tr>
<td>JH</td>
<td>Jardine Hall</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td>• College of Fine Arts</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Controller</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Graduate School</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Registrar</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Financial Aid</td>
<td></td>
</tr>
<tr>
<td></td>
<td>KMUW-FM (See Blake Hall)</td>
<td>B</td>
</tr>
<tr>
<td>KA</td>
<td>Charles Koch Arena</td>
<td>B</td>
</tr>
<tr>
<td>LH</td>
<td>Lindquist Hall</td>
<td>C-D</td>
</tr>
<tr>
<td></td>
<td>• Fairmount College of Liberal Arts and Sciences (also see Grace Wilkie Hall)</td>
<td></td>
</tr>
<tr>
<td>MC</td>
<td>McKinley Hall</td>
<td>B-C</td>
</tr>
<tr>
<td></td>
<td>Wheelchair entry at north and south ends</td>
<td></td>
</tr>
<tr>
<td>MK</td>
<td>McKnight Art Center</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td>Wheelchair entry for the south building, take sidewalk around the side closest to Wilner, and enter west door</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• School of Art and Design</td>
<td></td>
</tr>
<tr>
<td>MR</td>
<td>Marcus Welcome Center</td>
<td>F</td>
</tr>
<tr>
<td></td>
<td>• Admissions (Undergraduate)</td>
<td></td>
</tr>
<tr>
<td>ME</td>
<td>Media Resources Center</td>
<td>D</td>
</tr>
<tr>
<td></td>
<td>Memorial 70</td>
<td>B</td>
</tr>
<tr>
<td>MX</td>
<td>Hughes Metropolitan Complex (29th and Oliver)</td>
<td>D</td>
</tr>
<tr>
<td></td>
<td>• Conferences and Non-Credit Programs</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Small Business Development Center</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Speech-Language-Hearing Clinic</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Wichita Radio Reading Service</td>
<td></td>
</tr>
<tr>
<td>MH</td>
<td>Morrison Hall</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td>Wheelchair entry on east side</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Central Services, Purchasing</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Institutional Research</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Post Office</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• President, Vice Presidents</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• University Communications</td>
<td></td>
</tr>
<tr>
<td>NH</td>
<td>Neff Hall</td>
<td>C-D</td>
</tr>
<tr>
<td></td>
<td>• Honors Program</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Newman Center</td>
<td>D</td>
</tr>
<tr>
<td></td>
<td>Police Department</td>
<td>D</td>
</tr>
<tr>
<td></td>
<td>President's Residence</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td>Printing Services</td>
<td>D</td>
</tr>
<tr>
<td>RS</td>
<td>Rhatigan Student Center (RSC)</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td>Wheelchair entry possible at north and west entrances. Electric doors on both. This building was formerly called the Campus Activities Center</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Center for Student Leadership</td>
<td></td>
</tr>
<tr>
<td>SC</td>
<td>Southside Education Center</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td>Sheldon Coleman Tennis Complex</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td>Student Health Services</td>
<td>D-C</td>
</tr>
<tr>
<td></td>
<td>(See Ahlberg Hall)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ulrich Museum of Art, Edwin A.</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td>• Visual Communications</td>
<td>D-C</td>
</tr>
<tr>
<td></td>
<td>(Directly outside east door of Beech Wind Tunnel)</td>
<td></td>
</tr>
<tr>
<td>WH</td>
<td>Wallace Hall</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td>Wheelchair entry at north end</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• College of Engineering</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Warehouse</td>
<td>E</td>
</tr>
<tr>
<td>WE</td>
<td>West Campus (37th and Maize)</td>
<td>E</td>
</tr>
<tr>
<td>WS</td>
<td>Wheatshaker Apartments</td>
<td>E</td>
</tr>
<tr>
<td>WI</td>
<td>Wiedemann Hall</td>
<td>B</td>
</tr>
<tr>
<td>WA</td>
<td>Wilner Auditorium</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td>• School of Performing Arts</td>
<td></td>
</tr>
<tr>
<td>WC</td>
<td>Woodman Alumni Center</td>
<td>F</td>
</tr>
<tr>
<td></td>
<td>• Alumni Association</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Board of Trustees</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• WSU Foundation</td>
<td></td>
</tr>
</tbody>
</table>

Abbrev. Free campus phone on ground floor. Match those used in other publications.
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 areas are used in references to courses offered by those departments.

ACCT  Accounting
AE   Aerospace Engineering
ANTH Anthropology
ARTE Art Education
ARTF Art and Design Foundation
ARTG Graphic Design
ARTH Art History
ARTS Studio Arts
BA General Business Administration
BIOL Biological Sciences
BLAW Business Law
CESP Counseling, Educational, and School Psychology
CHEM Chemistry
CI Curriculum and Instruction
CJ Criminal Justice
COMM Communication
CS Computer Science
CSD Communication Sciences and Disorders
DANC Dance
DH Dental Hygiene
DS Decision Sciences
ECE Electrical and Computer Engineering
ECEON Electrical and Computer Engineering Economics
EE Electrical Engineering
EEPS Earth, Environment and Physical Sciences
EL Educational Leadership
EMBA Executive Master of Business Administration
ENGL English Language and Literature
ENGR General Engineering
ENTR Entrepreneurship
ETHS Ethnic Studies
FA Fine Arts—general
FIN Finance
FREN French
GEOG Geography
GEOI Geology
GERM German
GERO Gerontology
GREK Greek
HIST History
HNRS Honors Program
HP Health Professions—general
HRM Human Resource Management
HS Health Sciences
IB International Business
IE Intensive English
IME Industrial and Manufacturing Engineering
ITAL Italian
JAPN Japanese
KSS Kinesiology and Sport Studies
LASI Liberal Arts Interdisciplinary
LATN Latin
LING Linguistics
MATH Mathematics
MBA Master of Business Administration
MCLL Modern and Classical Languages and Literatures
ME Mechanical Engineering
MEDT Medical Technology
MGT Management
MICT Mobile Intensive Care Technician
MIS Management Information Systems
MKT Marketing
MUSA Music Performance
MUSE Music Education
MUSP Music Performance
NURS Nursing
PA Physician Assistant
PADM Public Administration
PHIL Philosophy
PHS Public Health Sciences
PHYS Physics
POL Political Science
PSY Psychology
PT Physical Therapy
RE Real Estate and Land Use Economics
REL Religion
RUSS Russian
SCWK Social Work
SOC Sociology
SPAN Spanish
STAT Statistics
THEA Theatre
WOMS Women’s Studies
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North Central Association of Colleges and Schools*
AACSB—International Association for Management Education
AACSB—International Association for Management—Accounting
   Accreditation Committee
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
Association of Schools of Allied Health Professionals
Commission on Collegiate Nursing Education
Commission on Accreditation in Physical Therapy Education
   of the American Physical Therapy Association
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 School Psychologists
National Association of Schools of Dance
National Association of Schools of Music
National Association of Schools of Public Affairs Administration
National Council for Accreditation of Teacher Education

*North Central Association of Colleges and Schools of Higher Learning Commission
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