UNDERGRADUATE CATALOG
1998-99

WICHITA STATE UNIVERSITY
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**Undergraduate Catalog 1998-99**

This catalog is a guide for information only and is not a contract. This catalog becomes effective Fall Semester 1998 and extends through the Summer Session 1999. The official University address is Wichita State University, 1845 Fairmount, Wichita, Kansas 67260. The general University telephone number is (316) 978-3456. For admission information, call toll-free (800) 362-2594. The University’s World Wide Web address is www.twsu.edu

The University reserves the right to change any of the rules and regulations of the University at any time, including those relating to admission, instruction, and graduation. The right to withdraw curricula and specific courses, alter course content, change the calendar, and impose or increase fees similarly is reserved. All such changes are effective at such times as the proper authorities determine and may apply not only to prospective students but also to those who already are enrolled in the University.
# Academic Calendar for 1998-99

## Fall Semester 1998
- **Aug. 17-22**: Fall semester registration
- **Aug. 24**: Weekday and evening classes begin
- **Sept. 7**: Labor Day, holiday
- **Oct. 16**: Midterm point
- **Oct. 30**: Final date for withdrawal with nonpenalty grades
- **Nov. 18-Jan. 9**: Telephone registration period for spring semester (exact dates published in the *Schedule of Courses*).
- **Nov. 25-29**: Thanksgiving recess
- **Dec. 10**: Last day of classes
- **Dec. 11**: Study Day
- **Dec. 12-18**: Final examinations
- **Dec. 19**: Fall semester ends

## Spring Semester 1999
- **Jan. 11-14**: Spring semester registration
- **Jan. 18**: Martin Luther King, Jr. Day, holiday
- **Jan. 15**: Classes begin
- **March 12**: Midterm point
- **March 22-28**: Spring recess
- **March 29**: Classes resume
- **April 2**: Final date for withdrawal with nonpenalty grades
- **April 17-Aug. 5**: Telephone registration period for fall semester (exact dates published in the *Schedule of Courses*).
- **May 7**: Last day of classes
- **May 8-14**: Final examinations
- **May 14**: Commencement
- **May 15**: Spring semester ends

## Summer Semester 1999
- **May 31**: Memorial Day, holiday
- **May 24-June 4**: Pre-session and workshops
- **June 1-4**: Summer Session registration
- **June 7**: Classes begin, first four-week term
- **July 2**: Last day of first four-week term
- **July 5**: Independence Day holiday
- **July 30**: Summer Session ends

## Notice of Nondiscrimination
Wichita State University does not discriminate in its programs and activities on the basis of race, religion, color, national origin, sex, age, or disability. The following person has been designated to handle inquiries regarding nondiscrimination policies: Director, Office of Affirmative Action, Wichita State University, 1845 Fairmount, Wichita, Kansas 67260-0145; telephone (316) 978-3371.
General Information

1998-99 University and Academic Officers
Eugene M. Hughes, President
Ted D. Ayres, General Counsel and Associate to the President
James J. Rhatigan, Senior Vice President
Frederick Sudermann, Senior Advisor to the President
Bobby R. Patton, Vice President for Academic Affairs
Elizabeth H. King, Vice President for University Advancement
Roger D. Lowe, Vice President for Administration and Finance
Anthony R. Ross, Interim Vice President for Student Affairs and Dean of Students
Michael Vincent, Dean of the Graduate School
Gerald H. Graham, Dean of the W. Frank Barton School of Business
Jon Engelhardt, Dean of the College of Education
William J. Wilhelm, Dean of the College of Engineering
Walter J. Myers, Dean of the College of Fine Arts
Stephen C. Gladhart and Bonnie J. Holaday, Interim Deans of the College of Health Professions
David C. Glenn-Lewin, Dean of Fairmount College of Liberal Arts and Sciences
James W. Kelley, Dean of University College
Jacqueline J. Snyder, Dean of Academic Outreach
Jasper G. Schad, Dean of Libraries
Bill Belknap, Director of Intercollegiate Athletic Association, Inc.

Board of Regents
State of Kansas
Harry W. Craig, Jr., Topeka
William R. Docking, Arkansas City
Thomas E. Hammond, Wichita
Kenneth C. Havner, Hays
Murray D. Luil, Smith Center
Phyllis Nolan, Louisburg
Sylvia Robinson, Kansas City
Robert V. Talkington, Iola
Sidney T. Warner, Cimarron
Stephen M. Jordan, Executive Director, Topeka

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. Degree programs range from the associate to the doctoral level and encompass 75 fields of study; nondegree 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.

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 some 15,000, Wichita State prides itself on specialized attention to each student. Although the University's students come from almost every state in the Union and 80 foreign countries, more than 87 percent are from Kansas representing every county in the state.

Because of its urban setting, Wichita State University has two student bodies—traditional and nontraditional. The average student age is 28, about one-third are married and 58 percent work full- or part-time. Although the nontraditional students are in the majority, there are 7,000 traditional students, ages 18 to 23, who devote themselves full-time to school and campus activities.

Wichita State University offers more than 60 undergraduate degree programs in more than 150 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 43 master's degrees which offer study in more than 100 areas; specialist in education degrees; and doctoral degrees in applied mathematics; chemistry; communicative disorders and sciences; human factors psychology and community/clinical psychology; educational administration; and aerospace, electrical, industrial, and mechanical engineering. A listing of the programs and degrees offered at Wichita State University is located on the inside back cover of the Catalog.

Committed to fulfilling the needs of each student, 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, an increasing number of courses is offered on an eight-week, four-week, or shorter format.

Although WSU's first commitment is to excellence in instruction, it has an equally strong commitment to excellence in research and public service as integral parts of its educational mission.

An important resource to the Wichita area business community, Wichita State supports research and development through programs such as the Center for Productivity Enhancement. The corporate community utilizes programs offered by the University's Center for Management Development for continuing professional development. The Center for Entrepreneurship and Small Business Management 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 103-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 Miro, 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, dance, and liberal arts and sciences.

Jabara Hall, completed in 1992, houses the departments of computer science, mathematics, physics, and psychology, as well as the Computing Center and its mainframe system. Elliott Hall, completed in 1995, houses the Elliott School of Communication.

More than 150 social and special interest clubs provide opportunities for students to meet and work with others who share their interests. Eight national sororities and 13 national 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.

History
Wichita State began as Fairmount College, a Congregational institution, in 1895. The college also continued the college preparatory program of Fairmount Institute which began in 1892. In 1926, by a vote of the citizens of Wichita, the college became the Municipal University of Wichita, the first municipal university west of the Mississippi.

After 38 years as a municipal university, WSU again changed its status July 1, 1964, when it officially entered the state system of higher education. Now, Wichita State University is one of six state universities governed by the Kansas Board of Regents.

During its 103-year history, the University has had 11 presidents. The men and their terms of office are Nathan J. Morriso

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 card in the dean's office of the appropriate college at least two semesters before the expected date of graduation
8. To enroll in only those courses for which the stated prerequisite(s) (if there are any) have been satisfactorily completed.
9. Failure to comply with this procedure may result in administrative withdrawal.
10. Students also should comply with the principles in the following statement, which was adopted by the Student Senate, the Faculty Senate, and the Administrative Council of the University:

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

    The rights and freedoms of students involve concomitant responsibilities. Incumbent on all students, as on all citizens, is the responsibility to observe the University's rules of orderly procedures and the laws of the larger community of which the University is a part. In the matter of actions on public issues, to speak one's opinion, to petition, to distribute literature, to assemble peacefully and hold meetings, to use the persuasion of ideas and other actions within the bounds of orderly and lawful procedures are sanctioned by the University. But infringement on the rights of others, acts or threats of violence to persons, destruction of property, disruption, or other interference with the
normal functioning of the University and its personnel and other disorderly and unlawful acts will not be countenanced.

Within its sphere of 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.

Academic Honesty
Opportunities for learning at Wichita State University involve the students' rights to express their views and to take reasoned exception to the views of faculty; to examine all questions felt to be appropriate to a course of study; to be protected from improper disclosure of their views and beliefs; to be examined in a fair and impartial manner; and to be treated with dignity and respect. Students are responsible, however, for learning the content of any course of study outlined by their instructors, regardless of any views or judgments privately held and for demonstrating their attainment in an honest manner.

Students who compromise the integrity of the classroom are subject to disciplinary action on the part of the University. Violations of classroom standards include:
1. Cheating in any form, whether in formal examinations or elsewhere
2. Plagiarism, using the work of others as one's own without assigning proper credit to the source
3. Misrepresentation of any work done in the classroom or in preparation for class
4. Falsification, forgery, or alteration of any documents pertaining to academic records
5. Disruptive behavior in a course of study or abusiveness toward faculty or fellow students.

A standard of honesty, fairly applied to all students, is essential to a learning environment. Students violating such standards must accept the consequences; penalties are assessed by appropriate classroom instructors or other designated people. Serious cases may result in discipline at the college or university level and may result in suspension or dismissal. Dismissal from a college for academic dishonesty constitutes dismissal from the University. Students accused of abridging a standard of honesty may protect themselves through established academic appeal procedures and are assured of due process and the right of appeal from accusations or penalties felt to be unjust.

Open Records
Students may inspect and review their educational records maintained by Wichita State. According to law, the University is allowed 45 days to respond to the requests, but typically the University responds within three days.

Students wishing to challenge the accuracy of their records are entitled to a hearing, upon written request to the dean of the college in which they are enrolled. The hearing is arranged by the dean.

Students also may receive the names of people from outside the University who request access to their records and the reason for such request. Similarly, students also may be informed of requests for records from individuals within the University who normally do not review student's education records.

Information in a student's records will not be released without his or her written permission.

Exceptions to these statements are noted in Public Law 93-380. A copy of the law is available to all students in the Division of Student Affairs, 103 Grace Wilkie Hall.

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.

Admission to Wichita State
Wichita State admits degree-bound college freshmen and transfer students as well as nondegree students who have special interests in college credit work but no immediate degree objectives at Wichita State University.

All students entering Wichita State for the first time must file an application for admission with the Office of Admissions, 111 Jardine Hall, and all but special open admission students (discussed later) must have transcripts of all high school and/or college work sent to Wichita State. Failure to report all schools attended will result in dismissal.

Students are encouraged to submit their application, fee, and official transcripts of previous work to the admissions office on or before August 1 for fall registration and January 1 for spring registration. Applications and transcripts from high school students will be accepted any time after their junior year.

Transcripts sent to the Office of Admissions must be mailed directly from the recording institution and will not be returned to the applicant.

New students may begin their college study during the Summer Session, the fall semester or the spring semester. Prospective students are encouraged to visit Wichita State to discuss their educational plans with an admissions officer and other University staff members.

Admission of a student to Wichita State University is independent of race, religion, color, national origin, sex, age, or disability. Any person having inquiries concerning violations may contact the Office of Affirmative Action, Wichita State University, 1845 Fairmount, Wichita, Kansas 67260-0145.

Degree-Bound Students
Freshmen
Students who will graduate from accredited Kansas high schools and will not attend another college before coming to Wichita State will be admitted to the University as freshmen after submitting an application, official high school transcript and a nonrefundable $20 application fee. Scores for the test battery of the American College Testing Program (ACT) must be submitted by students less than 21 years of age prior to enrollment. Application may be completed in one of two ways:
1. Students may apply online at the WSU web site by completing the application and printing and sending in the signature form along with the application fee. Transcripts must be sent directly from all schools attended.
2. Students may apply by printing the application off the WSU web site, completing it, and sending it along with the application fee. Transcripts must be sent directly from all schools attended.
3. Students also may apply by submitting a standard university application of admission and a nonrefundable application fee and having a six-semester transcript sent to the University. ACT scores also must be submitted to the University before enrollment.
Students who have already graduated from accredited Kansas high schools and have not attended another college also will be admitted to the University after submitting an application and application fee and having their high school send an official transcript to Wichita State's admissions office. ACT scores also must be submitted before enrollment. Graduates of nonaccredited Kansas high schools must score at least 18 on the ACT or 870 on the SAT-I to be admitted to Wichita State.

Out-of-state students who will be or have been graduated from a non-Kansas high school must also submit application, application fee, transcript and ACT or SAT test scores. To be eligible for admission, out-of-state students must (1) rank in the upper one-half of their high school graduating class or (2) have a minimum ACT composite score of 21 or a minimum combined SAT-I of 990 or (3) have high school grades of 2.00 or better on a 4.00 system. Exceptions may be made under special circumstances when valid reasons prevail.

Students who have not graduated from high school but have an equivalency certificate may apply by submitting an application for admission, application fee and official scores from the General Educational Development test. Admission is based on the GED scores. ACT scores also are required if the student is admitted and less than 21 years of age before enrollment. Students who have not taken the ACT must take math and English placement tests for class position.

Students who have declared an academic interest will be admitted in preprogram status within the college of their choice. Students must meet all necessary requirements of the degree-granting college prior to admission to degree program status. The individual college admissions requirements are given at the beginning of each college's section in the Catalog.

Students who are still deciding on an academic major will be admitted to University College for academic advising and career counseling.

Transfers

Students who have been enrolled in another college or university may be admitted to undergraduate study at Wichita State University if they have a minimum overall collegiate grade point average of 2.000 on a 4.00 system, are eligible to return to the college or university they last attended, and are able to meet the required scholastic standards of a college at Wichita State. Specific standards are given in each college's section of the Catalog.

If possible, transfer students should apply at least one semester before the semester in which they plan to enter Wichita State in order to receive maximum consideration for financial assistance and registration programs.

Transfer students are divided into two categories: (1) those with fewer than 24 college semester hours of credit or an undeclared major or who have not completed the Basic Skills component of the General Education Program and (2) those with declared majors and 24 or more college semester hours of credit and who have completed the Basic Skills component of the General Education Program. The Basic Skills include six hours of English composition, three hours of communication, and three hours of college-level mathematics.

Students must submit to Wichita State's Office of Admissions an application, application fee and an official transcript from each college or university attended.

1. Transfer students with fewer than 24 college semester hours of credit or an undeclared major or who have not completed the Basic Skills component of the General Education Program will be considered for admission to preprogram studies. These students must also submit an official transcript from their last high school. Before enrollment, students must submit scores from the ACT.

2. Transfer students who have declared a major, have 24 or more college semester hours of credit and have completed the Basic Skills component of the General Education Program are eligible to apply for admission to one of the six undergraduate degree-granting colleges. Official high school transcripts are required of a transfer student with more than 24 semester hours of credit only if they wish to receive financial aid.

Students transferring from a two-year college must complete at least 60 hours of four-year college work and 40 hours of upper-division work in order to qualify for graduation from Wichita State. In no case will work done in a two-year college be credited as junior- or senior-level work at Wichita State. (See requirements for graduation given in the Academic Information section.)

Wichita State participates in the Transfer and Articulation Agreement of the Kansas Public Community Colleges and State Colleges and Universities. The agreement stipulates that:

A student who completes an associate degree based on a bachelor's or-
through its Office of International Admissions, the Office of International Programs, and the Intensive English Language Center.

The University welcomes students of every national, racial, religious, ethnic, and cultural background. Admission decisions are based solely on the academic qualifications of applicants.

The University welcomes applications from students with various educational goals.

First bachelor's degree. Most students enter WSU to study for a bachelor's degree. Those entering as freshmen directly from high school usually take four years to complete this degree. Some students entering with transfer credits may earn the bachelor's degree in only one year, but others need two or more years, depending on the field of study and the number of transfer credits they bring to WSU.

Second bachelor's degree. Students who have completed one bachelor's degree may earn a second bachelor's degree at WSU. This may require only one year of additional study. However, it may take two or more years if the previous major and the new major do not share similar course requirements. The second bachelor's degree must be in a different major that the first.

Non-degree status. Some students wish to study for one or more semesters without earning a degree. They want to acquire knowledge in a new field or to add to their knowledge in a field in which they already have some expertise. Some wish to learn about the American way of approaching some areas of study or to have a study-abroad experience. Applications for non-degree status receive the same consideration as those from degree candidates.

Preparation for graduate study. Students who wish to earn a master's degree or PhD sometimes must complete prerequisites or "deficiencies" before beginning their graduate studies. It sometimes is best to complete these classes while enrolled as a non-degree undergraduate. For example, students who wish to complete the MBA after having earned their bachelor's degree in a non-business major often enroll in the "Pre-MBA" option. The Office of International Admissions will advise prospective graduate students about the appropriateness of undergraduate enrollment in their particular circumstances.

Students will be admitted according to the following guidelines:

1. They must be graduated from a recognized secondary school. If they have attended a university or college, they must have achieved an acceptable record. International students are not required to take the ACT or SAT exams.

2. They must submit an international student application form and a nonrefundable $50 international student application processing fee.

3. They must demonstrate proficiency in English. Undergraduate applicants who have not taken the Test of English as a Foreign Language (TOEFL) or whose score is below 530, must take an English proficiency test upon arrival on campus. Students who score 80 or higher (TOEFL equivalency of 550) on the proficiency test enroll in their program and complete at least one semester of full-time Intensive English enrollment. Those who score between 75 and 79 (500 to 529 TOEFL equivalency) enroll in a half-time academic program (two classes for up to eight credit hours) concurrent with half-time Intensive English enrollment. Students who score below 75 (TOEFL equivalency of less than 500) are required to complete at least one semester of full-time study in the Intensive English Language Center before enrolling in any academic classes. After one semester of Intensive English, students may take the TOEFL, which is administered on campus nine times each year. Those who score less than 530 continue enrollment in Intensive English on a full-time or part-time basis as determined by the score range mentioned above.

4. They must submit a statement of financial responsibility in the amount of $14,220 to cover expenses for one academic year (9 months). The amount required for 12 months, including Summer Session enrollment, is $17,660. Enrollment in the Summer Session is not required, but is available to students who wish to accelerate their progress towards a degree. Like all students from outside the state of Kansas, international students are considered nonresidents for tuition and fee purposes. See the Tuition section of this Catalog for additional details.

Wichita State University has a rolling admissions policy, which means that all applications are processed promptly as they are received. There are no application deadlines. All required records and forms must be received in the Office of International Admissions prior to admission. Students are expected to arrive and enroll at the University during registration week at the beginning of the term.

Admission decisions for students with non-U.S. educational records are based on the standard reference sources available to international admissions officers. Students with transfer work from U.S. universities or colleges must have achieved a minimum grade point average of 2.000 on a scale of 4.000. Marks achieved in particular subjects also may be considered, depending on the student's intended major field of study.

The University does not assume financial responsibility or guarantee monetary assistance for any student, including international students. Prospective and enrolled students must have sufficient financial support available to meet all the expenses of tuition, fees, books, room, and board, and so forth.

Under regulations of the U.S. Immigration and Naturalization Service, all international students are required to maintain full-time enrollment while in the U.S. Full-time enrollment is 12 credit hours per semester for undergraduates, nine credit hours per semester for graduate students, and 25 clock hours weekly for students in the Intensive English Language Center.

For further information or to obtain an application form, write:
Office of International Admissions
Wichita State University
Wichita, Kansas 67260-0122 USA
Telephone: (316) 978-3232
Fax: (316) 978-3777
E-mail: intadm@wsumuc.wsudo.edu
World Wide Web:
http://www.wsudo.edu/~ienglish

Graduate Students
Several categories of admission to Wichita State University Graduate School are available. Students seeking a graduate degree must have at least a bachelor's degree from a regionally accredited institution based on credits comparable to those allowed toward a degree by Wichita State, a minimum grade point average of 2.750 (on a 4.000 scale) in their last 60 hours of academic work and similar performance in their major field work, and no more than nine hours of background deficiencies in the major field of study. Individual departments and programs may require higher admission standards and additional supporting information. Students desiring to take work for graduate credit but not necessarily desiring to pursue a graduate degree may apply for admission in one of several nondegree categories depending upon their previous academic performance and goals. Specific requirements for all admission categories and for all programs are listed in the Wichita State University Graduate Bulletin.
Application for admission to graduate standing must be filed with the Graduate School three weeks before registration and must be supported by two complete and official transcripts of all college work (and other credentials required by the specific program desired) unless the student is a graduate of Wichita State University, in which case the Graduate School personnel will obtain transcripts of the student's work completed at WSU.

Only students formally admitted to an appropriate status in the Graduate School are permitted to enroll in courses numbered 800 through 999, and no official status is given by the Graduate School until a student's application and transcripts are on file and the transcripts have been evaluated by the major department and the Graduate School. Students who wish to receive graduate credit for work taken must be admitted to the Graduate School prior to the time of enrollment.

For further information about graduate programs or to obtain graduate application materials, contact Graduate Admissions, 107 Jardine Hall, Wichita State University, Wichita, Kansas 67260-0004, (316) 978-3095.

Academic Forgiveness

Students who have accumulated a grade point average of less than 2.000 may petition the dean of University College and the University Committee on Admissions and Exceptions to be admitted to a degree program with no college credit and no grade point average.

To qualify, petitioners must be at least 25 years old, must have been out of a degree program of college studies for at least four years, and must demonstrate ability to progress in college work.

If the petition is approved, all prior college courses and grades are recorded on the transcript, the notation "admitted without credits or grades by committee action" is made.

The policy may be applied to Wichita State University enrollment as well as to work at other colleges. When implemented, the policy waives all previous credits and grades except in the case of credits and grades earned in the special nondegree-bound status under the open admission policy.

Exceptions Committee

The University has an Exceptions Committee to review petitions from people seeking admission to the University who otherwise do not qualify. The process of petitioning may begin with the Office of Admissions or with academic advisors in University College or any of the under-graduate degree granting colleges.

The Committee also considers petitions from students seeking exceptions to specific academic rules and regulations. Students are advised to begin the petitioning process by consulting with academic advisors in their college of enrollment.

Nondegree-bound Students

Wichita State encourages students to pursue their educational goals. People wishing to continue their education with no immediate degree plans should apply and send copies of all college transcripts, or high school transcript if no college has been attended, to Wichita State's Office of Admissions. Students seeking graduate credit should write or call the Graduate School, 107 Jardine Hall, Wichita State University, Wichita, Kansas 67260-0004 (316) 978-3095.

Open Admission Students

To expedite admission for adult students who have not participated in formal education for some time, the Office of Admissions provides a simplified admission procedure. Students will be admitted to the nondegree program as special open admission students:

1. If they have graduated from an accredited high school, or have completed a GED, and have not attended any school for two years or
2. If they have not graduated from high school or completed a GED, are at least 21 years of age, and have not attended any school for at least two years or
3. If they are currently on active military duty or
4. If they hold a bachelor's or higher degree.

Students admitted under the open admission policy need only submit an application for admission and the application fee. Test scores and transcripts are not required.

Students admitted as open admission students will be considered nondegree bound for their first 15 semester hours. In order to pursue work beyond the semester in which the 15th hour is completed, students will be required to apply to continue as a regular non-degree student or as a degree bound student.

Guest Students

Students attending another college or university who wish to attend Wichita State on a temporary basis in the Summer Session should submit an application and application fee to the Office of Admissions. Students applying for guest admission in the fall or spring semester also must submit an official transcript showing a 2.000 grade point average from their home institution. Guest admission is granted for a total of 15 hours. Students who plan to continue at Wichita State beyond that limit must submit complete credentials. Students from other universities are usually enrolled as nondegree students in University College.

High school seniors who attend Wichita State before graduation from high school are also considered guest students. To be considered for admission as a high school guest, students who have completed their junior year should submit an application and an official high school transcript and obtain their counselor's permission to take college courses while still in high school. Younger students who wish to enroll for college work will be considered on an individual basis. High school guest admission must be renewed each semester.

International students on a student visa issued for another institution may be admitted as guest students at Wichita State providing they meet all criteria for admission outlined in the International Students section, including the TOEFL requirement.

Residence Defined

The Kansas legislature, rather than University policy, determines the residence of students entering Wichita State. 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/reenrollment 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."

A person who comes to Kansas to go to school, and who enrols 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 specific exceptions are authorized by state law. The following people, and their spouses and dependents, are authorized to pay the equivalent of resident fees immediately: (a) employees of the University; (b) people on full-time active military duty, stationed in Kansas; (c) people discharged or retired from active military service within the last thirty days under conditions other than dishonorable and who served at least two years in Kansas; (d) people who have lost their Kansas resident status within six months of their enrollment; (e) people who graduated from a four-year program at an accredited Kansas high school within six months of their enrollment at a state university, and who are Kansas residents for fee purposes at, or within 12 months of, high school graduation; and (f) people who were recruited to, or transferred to Kansas for a full-time job. The last exception requires certification by the employer on a special form, within 30 days after the semester begins. The form can be obtained from the Registrar's Office.

Residency of new students enrolling for the first time at Wichita State is determined by the admissions office according to the above law/regulations. Such students should address questions concerning residency to the Admissions Office. Continuing students should follow the procedure outlined below.

The responsibility of registering under proper residence 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 within 30 days, the classification or reclassification by the registrar becomes final. Appeals are reviewed and decided by the Faculty 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.

Academic Information

Orientation

Orientation and educational planning programs help new students become a part of the learning community and teach the requirements, expectations, and procedures of that community. At orientation, students meet with academic advisors, register for classes, obtain a student ID card, learn about campus life opportunities, obtain information regarding career development and cooperative education, and make important connections with WSU faculty, staff, current students, and other new students.

Specially selected student leaders and faculty members are carefully trained to work with new students in small groups during orientation.

Degree-bound Students: Because orientation and educational planning are not prerequisites to education, but rather are a part of college education itself, all first-year degree-bound students with fewer than 24 transfer hours are required to attend an academic orientation and to participate in personal planning sessions. Orientation programs are scheduled in advance of the fall and spring semester and Summer Session. Information about orientation and registration is sent by University College to all students who have been admitted to the University.

Nondegree-bound Students: Orientation programs are available, and recommended, for nondegree-bound students. UC 100A, Adult Seminar, a class designed for adults who have been out of school for one year or more, also is available as an enrollment option. Parts of the course serve as an ongoing orientation and the class is offered fall and spring semesters.

Contact University College for more information.

Registration

Specific information regarding registration is given in the Wichita State University Schedule of Courses published each semester and Summer Session. Students may not register after the first week of classes.

Falsification of information or withholding information pertinent to the records of the University is grounds for dismissal.

Classification of Students

Students are classified according to the following scheme:

- Freshmen: less than 30 semester hours earned
- Sophomores: 30 to 59 semester hours earned
- Juniors: 60 to 89 semester hours earned
- Seniors: 90 semester hours or more earned

As a general rule, a student taking 12 hours during the fall or spring semester is considered a full-time student. For graduate students, nine graduate credit hours are considered a full load. (Graduate students who are half-time teaching assistants are considered full time if they take six or more hours. Graduate students taking all or a majority of courses which carry undergraduate credit must meet the 12-hour requirement to be certified as full-time students.)

During the Summer Session, six hours are full time for both undergraduate and graduate students, with graduate teaching assistants full time with three hours.

In order to graduate with a bachelor's degree in eight semesters, a student must take an average of 16 credit hours per semester.

Meaning of Course Numbers

Courses numbered 99 or below do not count toward a bachelor's degree program.

Courses numbered 100 to 299 are designed primarily for freshmen and sophomores, but students from other classes may be admitted for lower-division credit. Graduate students may not take these courses for graduate credit.

Courses numbered 300 to 499 are taught primarily for juniors and seniors. Freshmen and sophomores also may be admitted if they satisfy the course prerequisites given in the Wichita State University Catalog. Graduate students may not take these courses for graduate credit.

Courses numbered 500 to 699 are aimed primarily at juniors and seniors, but graduate students may also receive graduate credit for these courses.

Courses numbered 700 to 799 are structured primarily for graduate students, but upper-division undergraduate stu-
Students may be admitted if they meet course prerequisites.

Courses numbered 800 to 999 are designed for graduate students only and no students may be admitted to these courses unless they have been admitted to the Graduate School. (See the Catalog section on graduate credit for seniors for special conditions under which seniors may be admitted to graduate courses.)

Credit/No Credit Courses

Courses numbered below 100 do not carry credit toward a Wichita State degree and are graded Credit/No Credit (Cr/NCr). All credit hours in such courses are parenthesized on the student’s transcript and the credit hours are excluded from credit toward graduation. Such courses are excluded from the calculation of the grade point average.

In addition, certain credit courses are graded only Cr/NCr. Any department in the University may offer courses on a Cr/NCr basis. This designation is included in the course description of such courses in the Wichita State University Catalog.

If students withdraw from a Cr/NCr course before the end of the tenth week of the semester, a grade of W is recorded. If they withdraw from such a course after the tenth week of a semester (fifth week of the eight-week Summer Session), then they receive a grade of NCr, subject to the right of petition to the University’s Committee on Admissions and Exceptions.

Cr/NCr may also be granted to a freshman for the first semester of work during the transition semester, as discussed in the Transition Semester section of the Catalog.

Transfer of Credits Within the University

From University College. Students will be automatically transferred from University College to one of the six undergraduate degree-granting colleges when they have selected an academic major from one of the degree-granting colleges.

Other Transfers Within the University. Students may transfer from any undergraduate degree-granting college to another or to University College provided they meet, as a minimum, the admission requirements of the second college. Some departments have space problems, they are forced to impose some limitations on the number of transfer students they accept. Such limitations must be approved by the dean of the college concerned and the vice president for academic affairs.

For specific information about probation standards and admission requirements of individual degree-granting colleges, refer to the individual college sections of the Catalog.

Examinations

The examination policy in each course is established by the department and the faculty of record and will be outlined with the course requirements. Reexaminations shall be permitted only with the consent of the faculty when reexamination is deemed to contribute to the academic objectives of the course.

Students cannot be required to take more than two final examinations per day. Arrangements for rescheduling the examination must be made by the student prior to the scheduled examination.

Special examinations, when requested, will be given only with the consent of the dean of the college involved. Students who are disabled should contact the Director of the Resource Center for Independence for assistance with special examinations.

Students who miss an assigned examination should arrange with their instructor to take a make-up examination. Deans of the college will serve as arbitrators only when deemed necessary.

Auditor

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 take advantage of the same privileges for class participation and instructor evaluation that students enrolled for credit have. Auditors are expected to attend class regularly. The audited course will appear on the transcript with the grade notation of Au.

Grading System

Wichita State grades include A, B, C, D, E, W, Au, Cr, NCr, S, U, I, R, and CrE.

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 hours earned toward graduation; zero credit points per semester hour. Counted as a course attempted and completed and included in computation of grade point average.

W Withdrawal from course. No credit given; no credit points. Does not affect grade point average but counts as an attempt in repeat policy.

Au Audit. No credit given; no credit points. Does not affect grade point average. Auditors may take advantage of the same privileges of class participation and instructor evaluation afforded students enrolled for credit.

Cr Credit (A, B, or C). Used only in the transition semester and for courses defined as Cr/NCr in the Catalog. Credit given; no credit points. See the Catalog section on credit/no credit courses.

NCr No Credit (D or F). Used only in the transition semester and for courses defined as Cr/NCr in the Catalog. No credit given; no credit points. See the Catalog section on credit/no credit courses.

S Satisfactory (A, B, or C). Credit given; no credit points assigned.

U Unsatisfactory (D or F). No credit given; no credit points assigned.

I Incomplete. Temporarily recorded as a grade when a student is granted an extension of time to complete course work. Credit is postponed and the course is not included in the student's grade point average until it is completed and a regular letter grade is assigned. An incomplete course must be satisfactorily completed by the end of the next semester in which the student enrolls, unless extended, or the I reverts automatically to an F. Students may not enroll in the course in which they received the I unless they do not enroll at WSU for one calendar year.

The following conditions govern incomplete:

1. If students do not enroll at Wichita State within one calendar year following an incomplete and if their work is not completed within that calendar year, they must enroll in that course as a repeat during their next semester of enrollment or the grade will be changed to F. If
they do enroll in the course again, the I is changed to W and the grade earned during the repeat semester becomes the grade of record. (If the course is not offered when they resume academic work, they must request an exception be made by the chairperson of the department offering the course. The department chairperson may authorize a substitute course, postpone action for a semester or authorize a grade of W.)

2. If students receive an incomplete on the third enrollment in the same course, they may not enroll in the course again (enrollment becomes subject to the regulations concerning the repeating of courses).

3. Incompletes are not counted when computing grade point average.

4. When students receive a grade of incomplete, they are informed of the policies and procedures governing the removal of incompletes.

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, RW, or RI. The R prefix has no evaluative function but is used for information only. The following provisions concern repeats:

1. No course may be attempted more than three times. For this policy a repeat of an audit does not count as an enrollment, but a W counts as an enrollment. Exceptions may be made in writing by the chairperson of a student's major department.

2. Any course may be repeated.

(a) Beginning June 1, 1987, for students first enrolling at a college or university on or after that date, all grades will be included in the computation of the grade point average through Summer 1994. Beginning Fall 1994, see (b).

(b) Beginning with the Fall 1994 semester, for all students, a grade of A, B, C, D, or F received at completion of a repeated class at WSU will automatically replace all previous grade(s) received for that course in computation of the student's cumulative grade point average. A student may use the option of repeating a course for the purpose of grade replacement for five (5) different courses during the student's academic career. Grades received in courses taken at another institution may not be used to replace grades in courses taken at WSU.

3. Students may audit the same course any number of times.

CrE Credit by examination or by credentials in lieu of formal enrollment in college course work. The symbol CrE is used for College Board Advanced Placement (AP) credit, for College-Level Examination Program (CLEP) credit, for course credit awarded on the basis of the American College Test (ACT), for credit by departmental examination and for credit by credentials (military and similar background). Credit given; no credit points.

Courses may not be changed from one status to another—for example, graded to audit—after the enrollment period (through the drop/add week), except through petition to the University's Committee on Admissions and Exceptions.

Other special terms are used in reference to grading, as described below.

Grade Point Average (GPA). The grade point average (also called grade point index) is computed by dividing the total number of credit points by the total number of semester hours completed for which a regular letter grades (A, B, C, D, and F) are assigned. The grades A, B, C, D, W, I, Cr, NCr, S, U, and CrE are always excluded from grade point average computations.

Credit Points. For each hour of work the student takes, credit points are assigned to regular letter grades (A, B, C, D, and F) to permit averaging of grades: A=4, B=3, C=2, D=1, and F=0.

Course Attempted. An attempted course indicates that the student has enrolled officially in the course and that the student may have completed the course, been granted an incomplete or withdrawn. Attempts include courses receiving the grades A, B, C, D, F, W, Cr, NCr, S, U, and I but exclude Au and CrE.

Course Completed. A completed course is a course in which a letter grade of A, B, C, D, F, Cr, NCr, S, or U has been assigned.

Credit Hours Earned. Credit hours earned means that credit is given (A, B, C, D, Cr, S, or CrE). No student may earn hours of credit for any one course more than once, unless the description in the Wichita State University Catalog specifically states that the course is repeatable for credit.

Change of Grades

Changes of grade due to errors in grading 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 also 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 dean of the college of the department concerned is needed to have the change in grade entered on the student's transcript. The dean must then notify the chairperson of the department concerned that the grade has been changed.

An instructor who wishes to request a change in a grade assigned more than one year earlier may petition the University's Committee on Admissions and Exceptions. If this committee approves a change in grade, the instructor, department chairperson, and dean concerned must be informed by the committee before its recommendation is transmitted to the Registrar's Office and the grade change entered on the student's transcript.

This change of grade policy does not affect the right of the student to appeal to the Court of Student Academic Appeals. However, the court will ordinarily not hear cases involving grades assigned more than one year prior to the time of appeal.

In cases where failing grades have been recorded because a student was unable to withdraw officially, the student may petition the dean of the college for a retroactive withdrawal from all courses in the semester in question. The student must provide verifiable evidence of the causes for failing to withdraw properly. If the petition is granted, the grades are changed to W through the usual withdrawal procedure.

If a student requests a change more than a year after the original grades were posted, the student's petition also must be approved by the University's Committee on Admissions and Exceptions. The policy applies to all courses in a semester and can be invoked only for Wichita State University courses.

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

Transition Semester

To accommodate students in their adjustment to college standards, they may be eligible for a special transition semester. The transition semester is a student's first regular semester at Wichita State regardless of the number of hours attempted (Summer Session excluded). However, students who have enrolled at another institution of higher learning in a regular term (summer term excluded) before enrolling
at Wichita State are not entitled to a transition semester at the University.

When students receive their graded reports (A, B, C, D, or F) and if they have below a 2.000 GPA, they may file a request with the dean of the student's college that all work in the transition semester be translated into Credit/No Credit (Cr/NCr) on their official records, with Cr applying to letter grades A, B, and C, and NCr applying to letter grades D and F.

To have letter grades translated into Cr/NCr, the Transition Semester Request Form must be filed by the student with the dean of the student's college between the posting of the semester grades and the student's next enrollment, including Summer Session. Students who file for transition semester will be placed on probation and will be required to meet the following criteria:

1. Students are limited to a maximum of 12 semester hours (or a proportional enrollment during Summer Session) or less during their next enrollment period.
2. Students must complete at least six (6) graded hours during their next enrollment (excluding Summer Session) before eligibility will be reviewed. This does not include enrollment in courses taken for Credit, Audit, or Satisfactory.
3. Students must receive at least a 2.000 GPA.

Students who fail to meet these requirements will not be awarded transition semester and will be subject to the appropriate probation or dismissal standards.

Credit by Examination

Advanced standing credit may be obtained by examination. The credit-by-examination program at Wichita State is designed to enable those who have achieved college-level education through independent study, correspondence, television instruction, past experience, or other traditional or nontraditional means to demonstrate their level of achievement. The test results may be used to gain college credit in undergraduate courses. Credit by examination will not be awarded for duplication of credit or to replace course grades. Students should check with their academic advisor before attempting any test. There are four means by which such credit may be earned:

1. Credit may be earned through an Advanced Placement (AP) examination administered by the College Entrance Examination Board (CEEB) through the student's high school. The AP program is administered by CEEB in cooperation with participating high schools. The tests are graded under the supervision of CEEB and the scores, which range from a high of five to a low of one, are sent to the college or university chosen by the student. Credit by AP examination is awarded at Wichita State in the areas of biological sciences, chemistry, English, French, German, history, Latin, mathematics, physics, Russian, and Spanish. Under the AP program, credit at Wichita State is granted for specific courses. The titles of the specific courses for which credit is granted and the scores necessary for such credit are available from the Wichita State admissions office.

2. Credit may be earned by examination through the College Board's College-Level Examination Program (CLEP). CLEP examinations are administered through the Wichita State Counseling and Testing Center. General CLEP examinations are intended for entering freshmen; a student with divisional credit will not receive additional hours by taking general CLEP examinations. Information about the dates and times at which CLEP examinations are given is available from the Counseling and Testing Center.

3. Credit for certain specified general education courses may be earned through examinations administered by the Wichita State Counseling and Testing Center. Information concerning the specific courses for which these tests are available and the standards applied in granting credit are available from the Counseling and Testing Center.

4. Individuals admitted to Wichita State may earn credit by departmental examination. In general, students may earn credit by examination for any undergraduate course not covered in the areas given above. Students should apply directly to the chairperson of the department offering the course and consult with the Counseling and Testing Center before taking the exam. The chairperson will make the examination available, unless the course has been exempted from credit by examination by the University's Academic Standards and Practices Committee. The chairperson will be responsible for ensuring that students are informed of the scope of the course, the text used, and other relevant information.

Except for special departmental exams discussed in the next paragraph, the grade recorded for credit earned by examination is CrE and it is recorded on a student's transcript after enrollment in the University. Students may not take a credit-by-examination test for credit in a course in which they have previously enrolled unless they received a W for the course. They may not retake any such examination. Students may not request an examination for course credit in a course for which they do not have the stated prerequisite credit. Credit earned by examination is treated exactly like that earned by class enrollment for internal purposes at Wichita State (class standing, completion of course prerequisites, college requirements, etc.).

It is possible to show letter grades on the transcript for departmental credit by examination if approval for letter grades is granted by the University's Committee on Academic Standards and Practices. Approval is granted if the department demonstrates to the committee that the testing procedure for credit by examination is equivalent to the testing procedure in the corresponding credit class. The Committee on Academic Standards and Practices asks for periodic review of this testing procedure. For example, the number of hours of testing through both the credit class and the credit examination should be approximately the same, and laboratory courses need to include laboratory experiences as a part of the credit examination. When letter grades are awarded for credit by examination, a notation identifying the credit as credit by examination will be included on the transcript along with a statement explaining that credit earned by examination represents equivalency with the examination experience and performance for the regularly graded course. When students take credit by examination for letter grades, the following additional policies apply:

a. Students are allowed to withdraw from any credit-by-examination test at any time prior to its evaluation. Prior to taking the exam, students must be informed of the option not to submit the exam for the recording of a grade. Once the exam is graded by the instructor, the grade earned is recorded on the transcript.

b. If the department has received approval of the University's Committee on Academic Standards and Practices to assign letter grades for departmental examinations and if the department has prepared separate tests for CrE and graded credit, students must select which test they want to take. If the department has prepared only the examination for graded credit, students have the option to have their test evaluated either for graded credit or CrE credit, provided that the
choice is declared to the department before the test is taken.

Fees are assessed to cover the costs of administering examinations and must be paid before the examinations are taken. A schedule of fees for the various examinations is available from the Counseling and Testing Center.

All credit by examination is subject to University policies and will be reviewed by the Registrar before being placed on the transcript.

Credit awarded by examination is determined by the department offering the course in consultation with the University’s Committee on Academic Standards and Practices. In the case of credit earned by departmental examination, the department has sole jurisdiction.

Credit by examination from all accredited institutions of higher education is evaluated in the same manner as regularly graded course work from these institutions. The credit awarded is adjusted to the credit-by-examination policies of Wichita State. Every attempt is made to ensure that credit by examination applies to both a student’s degree program and University requirements for graduation. However, in no case may a transfer student receive more credit than that available to students at Wichita State.

**Exemptions for Superior Achievement**

Students who have completed a minimum of 12 hours at Wichita State and have a cumulative grade point average of at least 3.250 and a grade point average of at least 3.000 the previous semester may be granted several privileges:

1. They may be exempt from regulations governing the maximum number of hours allowed students during a semester.
2. They also may be exempt from college regulations, if any, governing the maximum number of hours students may take during a semester in one department. However, no student shall enroll in more than 21 hours without the permission of their college dean.
3. They may have permission to have course prerequisites waived with the consent of the instructor of the course and the head of the department in which the course is taken.

**Graduate Credit for Seniors (Senior Rule)**

Seniors at Wichita State University or neighboring bachelor’s degree-granting institutions 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 ten hours of completing the bachelor’s degree may take work for graduate credit under the Senior Rule.

This work must go beyond the requirements for the undergraduate degree and the degree must be completed within the semester in which a student takes the graduate courses. Students also must be admitted to the Graduate School. Application for the Senior Rule is made to the Graduate School and must be approved by a student’s major advisor, chairperson for the department in which the course is taken, undergraduate dean, and the dean of the Graduate School before any courses can be taken for graduate credit.

**Emory Lindquist Honors Program**

The Emory Lindquist Honors Program provides an enriched university experience to outstanding students. It welcomes students who are highly motivated and well-prepared. The program offers seminars, honors colloquia, and honors sections of regularly scheduled courses. Each course is limited to 25 or fewer students. The program also extends opportunities for independent study and sponsors academic enrichment activities such as lectures, field trips, and participation in regional and national honors organizations.

The program promotes academic excellence at the undergraduate level by offering a challenging honors track within the University’s General Education Program, opportunities to earn academic distinction in a student’s departmental major, and various support services. The honors curriculum features small classes, experienced, highly committed faculty, and an approach to study that emphasizes participatory over passive learning. Support services provided by the program include academic advising and counseling and facilities where students can study, meet with friends, or just relax. The student-led Emory Lindquist Honors Society sponsors a variety of academic and non-academic activities.

Broad program policy is established by the Faculty Honors Committee and is subject to approval by the vice president for academic affairs. The honors director, in conjunction with the student Honors Executive Council, makes policy recommendations and sponsors student activities. The director is selected for a three-year term.

Generally, freshmen are admitted to the program if their composite score on the Enhanced American College Test (ACT) is 26 or higher, or if their high school grade point average is 3.500 or higher as certified by the University. Transfer and continuing students may enter the program if they have achieved a minimum grade point average of 3.250 in university-level studies and if they satisfy other transfer and admission criteria established by the program. Students who satisfy the minimum grade point average requirements but who are not members of the program may enroll in honors courses if they have the permission of the honors director. To be admitted to the program, a student needs to submit an Honors Program Application and meet with a program representative.

Students in the Emory Lindquist Honors Program are expected to remain in good standing by maintaining at least a 3.250 grade point average overall, a 3.000 grade point average in honors courses, and by making regular progress toward completion of the honors curriculum. Students whose performance falls below these expectations will be placed on probation with the honors program.

**Probation**

A student whose overall or honors grade point average falls below program requirements will be put on probation for the next semester of enrollment.

A student will be removed from probation if grade point requirements are satisfied for work taken during the next semester of enrollment.

In the semester following that, the student’s overall and honors grade point averages need to satisfy program requirements or the student will be dismissed from the program. Students may appeal dismissal to the Faculty Honors Committee by demonstrating compelling reasons why they should be permitted to continue as an honors student.

**Normal Progress**

Normal progress towards completion of the honors curriculum is defined as follows:

- complete one seminar within the first 15 credit hours at WSU
- complete two seminars within the first 30 credit hours at WSU
- complete three seminars within the first 45 credit hours at WSU
- submit a Senior Project Study Proposal approved by the major department after achieving senior status.
Graduation Requirements

To graduate with the notation "Honors Program Graduate" on his or her transcript, a student must satisfy the following requirements:

- complete the required honors curriculum
- achieve an overall grade point average of at least 3.250
- achieve a grade point average of at least 3.250 in all honors courses.

Graduation Honors

In addition to recognition awarded by the University to all students achieving outstanding academic records, honors program graduates are eligible for additional recognition.

Students who satisfy honors graduation requirements receive the notation "Honors Program Graduate" on their transcripts and are recognized at Commencement.

The highest ranked honors program graduates each year are named Emory Lindquist Scholars and are recognized at Commencement.

With departmental approval, honors program participants completing a senior project earn departmental honors at graduation.

Honors Curriculum

Adopted in 1996, the honors curriculum offers students an honors track for completing University general education requirements. A student is also required to complete an approved senior project in their major department.

Freshman/Sophomore Seminars. In each of their first three semesters at the University, honors students substitute an honors seminar for one of their required general education distribution courses. Enrollment in seminars is limited to 15 students.

Seminars are offered in fine arts, humanities, social and behavioral sciences, and natural sciences and mathematics. Each seminar has a specific topic.

Students submit a Seminar Request Form to indicate in which seminar they would like to enroll. Generally, students will be assigned to their first or second choice.

In honors seminars students can expect to work closely with fellow students and the professor. Seminars are designed to stimulate learning by introducing students to basic questions in various fields of study, the methods of inquiry developed to deal with these questions, and the connections between different branches of knowledge. Many seminars are interdisciplinary. Seminars emphasize the development of learning skills, including writing, oral communication, library research, and laboratory methods.

Honors Issues and Perspectives Seminars.
The University requires all students to take one or two issues and perspectives courses as part of the General Education Program. Honors students satisfy this requirement by taking at least one honors issues and perspectives seminar and either a second seminar of an honors upper-division course in an appropriate general education discipline during the sophomore, junior, or senior year.

Senior Project. To complete honors requirements, a student designs a six-hour senior project in consultation with his or her major department. A senior project may take the form of a senior paper, laboratory research project, independent study project, internship, departmental seminar, other appropriate studies, or a combination of these. Each department determines what is appropriate for its majors. Students submit a Senior Project Study Proposal approved by their major department when they become seniors.

Additional Honors Courses. Additional honors courses are offered regularly, including honors sections of English composition, oral communication, and calculus. Students are strongly encouraged to enroll in these sections as they complete other University requirements. Grades earned in these classes are included in a student's honors grade point average.

Lower-Division Courses

>104. Seminar I: Fine Arts. (3-4). General education introductory course. Topics vary. Prerequisite: Beginning honors student or permission of honors director.

>105. Seminar I: Humanities. (3-4). General education introductory course. Topics vary. Prerequisite: Beginning honors student or permission of honors director.

>106. Seminar I: Social and Behavioral Sciences. (3-4). General education introductory course. Topics vary. Prerequisite: Beginning honors student or permission of honors director.

>107. Seminar I: Mathematics and Natural Sciences. (3-5). 1-3R; 1-2L. General education introductory course. Topics vary. Prerequisite: Beginning honors student or permission of honors director.

>150. Seminar II: Fine Arts. (3-4). General education introductory course. Topics vary. Prerequisite: Honors 104 and six additional credit hours, or permission of honors director.

>151. Seminar II: Humanities. (3-4). General education introductory course. Topics vary. Prerequisite: Honors 105 and six additional credit hours, or permission of honors director.

Upper-Division Courses

>204. Seminar III: Fine Arts. (3-4). General education issues and perspectives course. Topics vary. Prerequisites: Honors 104 and 151 and twelve additional credit hours, or permission of honors director.

>205. Seminar III: Humanities. (3-4). General education issues and perspectives course. Topics vary. Prerequisites: Honors 105 and 150 and twelve additional credit hours, or permission of honors director.

>206. Seminar III: Social and Behavioral Sciences. (3-4). General education issues and perspectives course. Topics vary. Prerequisites: Honors 106 and 152 and twelve additional credit hours, or permission of honors director.

>207. Seminar III: Mathematics and Natural Sciences. (3-5). 1-3R; 1-2L. General education issues and perspectives course. Topics vary. Prerequisites: Honors 107 and 153 and twelve additional credit hours, or permission of honors director.

>410. Independent Study. (1-4). Repeatable to a maximum of six hours of credit.

>420Q. Seminar in Humanities. (3-4). General education issues and perspectives course. Topics vary. Prerequisites: Honors 204 or permission of honors director.

>430Q. Seminar in Social and Behavioral Sciences. (3-4). General education issues and perspectives course. Topics vary. Prerequisites: Honors 204 or permission of honors director.

>440Q. Seminar in Natural Sciences and Mathematics. (3-5). General education issues and perspectives course. Topics vary. Prerequisites: Honors 204 or permission of honors director.

>450Q. Seminar in Fine Arts. (3-4). General education issues and perspectives course. Topics vary. Prerequisites: Honors 204 or permission of honors director.

Honors Mentor Program

Much of the excitement of college learning comes through informal discussions with faculty and other students. Honors 310, Honors Tutorial: Selected Readings offers just such an opportunity. This course features informal discussions between groups of five or six students and a faculty mentor. While four or five
books are read and discussed during the semester, the primary purpose of the course is to personalize the educational experience and give students an opportunity to talk about other education concerns they may have.

**Independent Study**

**Leading to a Degree**

**With Departmental Honors**

Outstanding students may enroll in the junior or senior years in independent study which leads to a degree with departmental honors if the work is satisfactorily completed. Students with junior standing and a cumulative grade point average of 3.250 are eligible to conduct projects in their major area of study. A student considering such a project should begin planning the work well in advance of the semester during which the work is to be done. In order to enroll in Honors 410, Independent Study, the student must consult with the honors director and obtain the approval of the instructor in the student's major department who will be the advisor for the project. The written application must then be approved by the chairperson of department and by the dean of the student's college. The completed application form must be filed with the honors director no later than the second week of the semester during which the student desires credit for the work.

An independent study project should consist of original research or creative work. To be graduated with departmental honors, a student must complete the independent study project and write the results according to specifications established by the honors director. The student must be examined on their project and other aspects of the major field of study. A three-member faculty committee conducts the examination and determines the student's eligibility for graduation with departmental honors. Students failing to secure such a degree either because of failure to complete their projects or failure in the examination will receive academic credit toward the regular degree for the credit hours completed, with the grade determined by the instructor under whom the work was performed. In no case may any student receive more than six hours of credit for independent study.

**Academic Recognition**

In all colleges, honors criteria are established for Wichita State students by the University and apply equally to all students, whether or not they are in the Emory Lindquist Honors Program. All honors are based on WSU grade point average.

The Dean's Honor Roll is published each semester and is composed of students enrolled in 12 or more semester hours of graded work who achieve a grade point average of 3.500 or higher for a semester.

Students enrolled in six through eleven hours of graded work per semester who achieve a grade point average of 3.500 or higher will receive Academic Commendation. The list of such students will be published each semester.

Degrees are conferred with distinction upon students who have shown excellence in scholarship. The minimum standard for graduating *summa cum laude* is a grade point average of 3.900 on Wichita State course work. The minimum standard for graduating *magna cum laude* is a grade point average of 3.550 on Wichita State course work. The minimum standard for graduating *cum laude* is a grade point average of 3.250 on Wichita State course work.

**Withd r awal**

**Voluntary Withdrawal**

Students encountering special problems during a semester may protect their record through voluntary academic withdrawal based on the following procedures:

Students may withdraw voluntarily from any or all courses through the tenth week of a semester or the fifth week of the eight-week Summer Session and have a W recorded for the course(s).

After the tenth week of a semester or the fifth week of the eight-week Summer Session, students may withdraw from one or more courses with a W only if they petition the dean of their college and if the University's Committee on Admissions and Exceptions approves their petition. (The alternative to a W is an F.)

When students wish to withdraw, they must consult an advisor, obtain drop slip(s) for every course (line number), and have their advisor sign in the appropriate place. They must then take the drop slip(s) to the instructor of each dropped course and obtain the instructor's signature. After receiving the instructor's signature for each dropped course, students must take the drop slip(s) to the office of the dean of the appropriate college for the dean's signature and final approval. The completed drop slip(s) must then be taken to the Registrar's office in Jardine Hall. Refund, if any, will be made according to the schedule published in the Wichita State University Schedule of Courses.

Complete withdrawal from Wichita State must be made in writing to the dean's office of the appropriate college.

**Administrative Withdrawal**

Administrative withdrawal may be initiated by the dean's office of the college in which a student is enrolled, the Business Office, Division of Student Affairs, or other appropriate University offices for the following reasons:

1. The student's class attendance is so poor that in the instructor's opinion full benefit cannot be derived from the course.
2. A University College student fails to be accepted by a degree-granting college by the time of completion of 48 credit hours.
3. The student fails to complete successfully all prerequisites for those courses in which the student is enrolled.
4. The student violates the provisions of the student's responsibilities statements in the University Catalog. (See the Student Responsibility section of the Catalog.)
5. The student does not comply with the terms of a provisional admission.
6. The student has unmet financial obligations to the University.

The office initiating administrative withdrawal will notify the dean of the college in which the student is enrolled when withdrawal proceedings are initiated. The student is then notified by the dean's office that he or she may be withdrawn administratively so that the student may explain his or her position before final action is taken. If official notices from the dean's office are ignored or returned because the address given by the student at the time of enrollment is incorrect, administrative withdrawal will take place 15 days after the initial notice. A grade of W or F will be officially recorded on the student's permanent record for a course or courses from which the student is administratively withdrawn. The grade of F will be recorded only if the administrative withdrawal is for academic reasons.

**Academic Progress Reports**

Reports on a student's progress are given in several ways.

*Midterm Drop Reports.* At midsemester, a Down Report may be sent to students doing below average work, and to their academic advisor, as an indication that
their grades need to be improved. Students should meet with their instructor and/or college advisor to discuss the problem.

Absence Letters. Faculty members who make regular attendance checks may inform the dean of a student's college when the student is absent excessively. The dean may either process an administrative withdrawal or request that the student initiate an official withdrawal or make arrangements with the instructor to complete the course. Students failing to take either course of action will receive an F at the end of the semester.

Informal Warning. Students with an overall grade point average above the level required by their college for graduation (or above 2.000 for University College) but below this level for one semester may receive a letter from the dean of their college warning of the consequences of continued substandard performance. Such warnings do not appear on a student's transcript.

Academic Probation and Dismissal Standards

Specific regulations governing probation and dismissal standards are established by each college at Wichita State and are given in the introductory statements in the individual college and the University College sections of the Catalog. Students should consult the appropriate section of the Catalog for these standards.

Since 2.000 (a grade of C) is the minimum grade point average required for graduation from Wichita State, students are formally placed (or continued) on probation at the conclusion of every semester in which their overall WSU grade point average falls below 2.000, except as noted below. If the college in which students are enrolled has a higher graduation requirement, students may be placed on probation whenever their WSU grade point average falls below the college's specified level.

Students admitted in good standing will be placed on probation when they have attempted six hours and their WSU grade point average falls below 2.000. Attempted hours are defined as all hours appearing on the transcript with a grade of A, B, C, D, F, W, Cr, NCr, I, S, or U.

Transfer students admitted on probation must complete at least 12 semester hours at Wichita State with a 2.000 average before probation may be removed.

A student on academic probation is limited to a maximum of 12 semester hours in the fall and spring semesters.

Dismissal standards are set by the various colleges and by University College of Wichita State in conformance with the following policy.

Students will not be dismissed if either their WSU grade point average or their last semester's grade point average equals the minimum graduation level of their college. They will remain on probation as long as their WSU grade point average is below the minimum University or college graduation standard and their semester grade point average meets the minimum college or division standard.

Students will be dismissed at the end of the semester in which they accumulate 12 attempted credit hours with a semester and WSU grade point average below the minimum required after being placed on probation. Students are not academically dismissed at the end of a semester unless they began that semester on academic probation.

Dismissal from a college because of poor academic performance constitutes dismissal from the University. Nonetheless, a student whose grade point average qualifies him or her for admission to another college may apply to the Committee on Admissions and Exceptions of that college.

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 feel 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 Student Affairs, 103 Grace Wilkie Hall. The general procedure is explained to students when they pick up the form.

General Education Program

The General Education Program seeks to provide each student with a body of knowledge that is both a broad foundation for his or her major field of study, and also the beginning of what is necessary to become a genuinely educated person. The General Education Program provides the opportunity for all students to grow in their knowledge and appreciation of the rich variety of human achievements in the arts, humanities, and sciences.

The goals for general education are as follows: 1) to understand the humanities and how they explore the complexity of the human experience; 2) to understand and appreciate various art forms; 3) to understand human functioning and behavior in individuals, groups, institutions, and societies; 4) to understand the natural sciences, their application in technological innovation and development, and their impact on society; 5) to study and apply basic mathematical principles; and 6) to study and apply principles of written and oral communication. The program combines required courses in the Basic Skills (composition, oral communication, and mathematics) with Introductory courses in the disciplines. Further Study courses in the disciplines, and Issues and Perspectives courses.

Significant development of oral and written communication, mathematical, and library research skills is expected of all Wichita State University graduates.

Students transferring to Wichita State University under the Transfer and Articulation Agreement of the Kansas Public Community Colleges and State Universities are considered to have met the requirements of Wichita State University General Education Program as determined by transcript evaluation. This refers only to students with previous college credit and is not applicable to entering freshmen.

Students entering the University in or after the Fall Semester of 1994 must satisfy the following requirements:

I. Four Basic Skills courses (to be completed during the first 48 college hours with a grade of C or better).
   A. English 100 or 101, and 102
   B. Communication 111
   C. Mathematics 111, 112, 131 or another math class for which one of these is a prerequisite

   Students with deficiencies in the Basic Skills may be required to take background work or refresher courses.

II. Seven Introductory courses in the disciplines, to include
   A. One course chosen from one of the following Fine Arts disciplines:
### General Education Requirements

<table>
<thead>
<tr>
<th>Basic Skills to be completed with a C or better (12 hours minimum)</th>
</tr>
</thead>
<tbody>
<tr>
<td>English Composition I and II</td>
</tr>
<tr>
<td>Oral Communication</td>
</tr>
<tr>
<td>Contemporary Mathematics, College Algebra, Precalculus Mathematics or another math class for which one of these is a prerequisite</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fine Arts and Humanities (12 hours minimum)</th>
</tr>
</thead>
<tbody>
<tr>
<td>One Introductory course: Art History, Dance, Musicology-Composition and Theater</td>
</tr>
<tr>
<td>Two Introductory courses, one chosen from each of two of the following disciplines: Communication*, English*, History, Linguistics, Modern and Classical Languages and Literature, Philosophy, Religion, Women's Studies</td>
</tr>
<tr>
<td>One Further Study course* in either Fine Arts or Humanities</td>
</tr>
<tr>
<td>or An Issues and Perspectives** course in Fine Arts or Humanities</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Social and Behavioral Sciences (9 hours minimum)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two Introductory courses, one chosen from each of two of the following disciplines: Anthropology, Economics, Geography, Minority Studies, Political Science, Psychology, Sociology</td>
</tr>
<tr>
<td>One Further Study course* in one of the Social and Behavioral Sciences</td>
</tr>
<tr>
<td>or An Issues and Perspectives** course in the Social and Behavioral Sciences</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mathematics and Natural Sciences (9 hours minimum)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two Introductory courses, one chosen from each of two of the following disciplines: Biology, Chemistry, Computer Science*, Geology, Mathematics/Statistics*, Physics</td>
</tr>
<tr>
<td>(At least one of these courses must be chosen from Biology, Chemistry, Geology or Physics.)</td>
</tr>
<tr>
<td>One Further Study course* in one of the Mathematics/Natural Sciences disciplines</td>
</tr>
<tr>
<td>or An Issues and Perspectives** course in the Mathematics/Natural Sciences</td>
</tr>
</tbody>
</table>

* Nonprofessional courses only, and excluding Basic Skills.
** Students must take one Issues and Perspectives course; no more than two Issues and Perspectives courses will count for general education credit.

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Art History, Dance, Musicology-Composition, and Theater.

**B. Two courses, one chosen from each of two of the following**

- **Humanities disciplines**: Communication*, English*, History, Linguistics, Modern and Classical Languages and Literature, Philosophy, Religion, and Women's Studies.

**C. Two courses, one chosen from each of two of the following**

- **Social and Behavioral Science disciplines**: Anthropology, Economics, Geography, Minority Studies, Political Science, Psychology, and Sociology.

**D. Two courses, one chosen from each of two of the following**

- **Mathematics/Natural Sciences disciplines**: Biology, Chemistry, Computer Science*, Geology, Mathematics/Statistics*, and Physics. At least one of these courses must be chosen from Biology, Chemistry, Geology, or Physics.

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**III. Three Further Study courses, distributed as follows:**

**A. A Further Study (but not Introductory) course* in one of either the Fine Arts or the Humanities disciplines chosen for an Introductory course:**

| or |
| An Issues and Perspectives** course in the Fine Arts or the Humanities. |

**B. A Further Study (but not Introductory) course* in one of either the Social and Behavioral Sciences disciplines chosen for an Introductory course:**

| or |
| An Issues and Perspectives** course in the Social and Behavioral Sciences. |

**C. A Further Study (but not Introductory) course* in one of either the Mathematics/Natural Sciences disciplines chosen for an Introductory course:**

| or |
| An Issues and Perspectives** course in the Mathematics/Natural Sciences. |

* Non-professional courses only, and excluding Basic Skills.
** Students must take one Issues and Perspectives course; no more than two Issues and Perspectives courses will count for general education credit.

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General education courses must be at least three credit hours and from the approved general education course list. All courses which qualify for general education credit have a caret (>) prefix in the Catalog and the Schedule of Courses. Courses within a student's major department shall not count in fulfilling general education requirements. (This restriction applies only to one major. For students with a double major, courses in the second major could count in fulfilling their requirements.)

**Introductory Courses**

Introductory courses in the disciplines which qualify for general education credit are identified with a caret (>) prefix in the course listings for departments/programs/disciplines in the Undergraduate Catalog and each semester's Schedule of Courses.

**Fine Arts Courses**

- Art H. 121G, Survey of Western Art: Ancient
- Art H. 122G, Survey of Western Art: Renaissance and Baroque
- Art H. 124, Survey of Western Art: Modern
- Dance 140, Art of the Dance
- Mus. C. 160G, Heritage of Western Music
- Mus. C. 162G, World Music
- Thea. 143G, Art of the Theater

**Humanities Courses**

- Comm. 190G, Introduction to Human Communication
- Engl. 230G, Exploring Literature
- Engl. 232G, Themes in American Literature
- Fren. 210Q, Intermediate French (P)
- Germ. 220Q, Continuing German (P)
- Greek 223, Intermediate Greek (P)
- Hist. 100G, World Civilization since 1500
- Hist. 101G, Western Civilization to 1648
- Hist. 102G, Western Civilization from 1648
- Hist. 131Q, History of the USA: Colonial Period to 1877
- Hist. 132Q, History of the USA: 1877 to Present
- Latin 223, Intermediate Latin (P)
- Ling. 151G, The Nature of Language
- Phil. 100G, Meaning of Philosophy
- Phil. 125Q, Introductory Logic
- Phil. 144Q, Moral Issues
- Rel. 110Q, Old Testament
- Rel. 115Q, New Testament
- Russ. 210Q, Intermediate Russian (P)
- Span. 210Q, Intermediate Spanish (P)
- Wom. S. 190G, The American Woman
- Wom. S. 287Q, Women in Society: Social Issues
### Social and Behavioral Sciences Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anthr. 100G</td>
<td>Anthropology of Modern (American) Life</td>
</tr>
<tr>
<td>Anthr. 101Q</td>
<td>Biological Anthropology</td>
</tr>
<tr>
<td>Anthr. 102Q</td>
<td>Introduction to Cultural Anthropology</td>
</tr>
<tr>
<td>Anthr. 124Q</td>
<td>General Anthropology</td>
</tr>
<tr>
<td>Anthr. 126G</td>
<td>Introduction to Archaeology</td>
</tr>
<tr>
<td>Econ. 201Q</td>
<td>Principles of Macroeconomics</td>
</tr>
<tr>
<td>Geog. 125Q</td>
<td>Principles of Human Geography</td>
</tr>
<tr>
<td>Geog. 210Q</td>
<td>World Geography</td>
</tr>
<tr>
<td>Min. S. 100Q</td>
<td>Introduction to Minority Studies</td>
</tr>
</tbody>
</table>

### Further Study Courses

Further Study courses in the disciplines which qualify for general education credit are identified with a caret (>) prefix in the course listings for departments/programs/disciplines in the Undergraduate Catalog and each semester's Schedule of Courses.

### Fine Arts Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art 301</td>
<td>Introduction to Entrepreneurship in the Fine Arts</td>
</tr>
<tr>
<td>Art H. 223</td>
<td>Northern Renaissance</td>
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<tr>
<td>Art H. 322</td>
<td>Medieval Art I</td>
</tr>
<tr>
<td>Art H. 323</td>
<td>Medieval Art II</td>
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<tr>
<td>Art H. 324</td>
<td>Northern Baroque</td>
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<tr>
<td>Art H. 325</td>
<td>Art of the Ancient Near East and Egypt</td>
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<tr>
<td>Art H. 421Q</td>
<td>Art of Ancient Greece</td>
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<tr>
<td>Art H. 422</td>
<td>Roman Art and Architecture</td>
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<tr>
<td>Art H. 521Q</td>
<td>Italian Renaissance</td>
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<tr>
<td>Art H. 522</td>
<td>Southern Baroque</td>
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<tr>
<td>Art H. 525</td>
<td>20th Century Art before 1945</td>
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<tr>
<td>Art H. 526</td>
<td>Art since 1945</td>
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<td>Art H. 530</td>
<td>The Art of Classical Greece</td>
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<td>Art H. 531</td>
<td>The Art of Hellenistic Greece</td>
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<tr>
<td>Art H. 535</td>
<td>Northern Renaissance</td>
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<tr>
<td>Dance 225Q</td>
<td>Dance History I</td>
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<td>Dance 315</td>
<td>Music for Dance (P)</td>
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<td>Mus. C. 161</td>
<td>Music through the Ages</td>
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<td>Mus. C. 163</td>
<td>The Blues: Art and Culture</td>
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<td>Mus. C. 325</td>
<td>Periods of Music History (P)</td>
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<tr>
<td>Mus. C. 334Q</td>
<td>History of Music I (P)</td>
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<tr>
<td>Mus. C. 355Q</td>
<td>History of Music II (P)</td>
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<td>Mus. C. 366Q</td>
<td>Styles of Jazz</td>
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<td>Mus. C. 493G</td>
<td>American Popular Music</td>
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<td>Mus. C. 616</td>
<td>Symphonic Literature</td>
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<td>Mus. C. 623</td>
<td>Opera Literature</td>
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<tr>
<td>Thea. 221Q</td>
<td>Oral Interpretation</td>
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<tr>
<td>Thea. 241</td>
<td>Improvisation and Theatre Games</td>
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<tr>
<td>Thea. 243Q</td>
<td>Acting I</td>
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<td>Thea. 450</td>
<td>Contemporary Theater and Drama (P)</td>
</tr>
<tr>
<td>Thea. 516</td>
<td>Playwriting I (P)</td>
</tr>
<tr>
<td>Thea. 517</td>
<td>Playwriting II (P)</td>
</tr>
<tr>
<td>Thea. 542</td>
<td>Advanced Acting (P)</td>
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<tr>
<td>Thea. 623Q</td>
<td>Development of the Theater I</td>
</tr>
<tr>
<td>Thea. 624Q</td>
<td>Development of the Theater II</td>
</tr>
</tbody>
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### Humanities Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comm. 221Q</td>
<td>Oral Interpretation</td>
</tr>
<tr>
<td>Comm. 302</td>
<td>Interpersonal Communication</td>
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<td>Comm. 311</td>
<td>Persuasive Speaking</td>
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<tr>
<td>Comm. 312Q</td>
<td>Nonverbal Communication (P)</td>
</tr>
<tr>
<td>Comm. 313Q</td>
<td>Argumentation and Advocacy</td>
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<tr>
<td>Comm. 430</td>
<td>Communication Research and Inquiry (P)</td>
</tr>
<tr>
<td>Comm. 555</td>
<td>Communication Analysis and Criticism (P)</td>
</tr>
<tr>
<td>Comm. 631</td>
<td>Historical and Theoretical Issues in Communication (P)</td>
</tr>
<tr>
<td>Eng. 252Q</td>
<td>Modern American Writers</td>
</tr>
<tr>
<td>Eng. 254Q</td>
<td>Modern British Literature</td>
</tr>
<tr>
<td>Eng. 272Q</td>
<td>Origins of Western Literature</td>
</tr>
<tr>
<td>Eng. 275Q</td>
<td>Studies in Popular Literature</td>
</tr>
<tr>
<td>Eng. 290Q</td>
<td>The Bible as Literature</td>
</tr>
<tr>
<td>Eng. 315</td>
<td>Introduction to English Linguistics</td>
</tr>
<tr>
<td>Engl. 320Q</td>
<td>The Nature of Drama</td>
</tr>
<tr>
<td>Engl. 330Q</td>
<td>The Nature of Fiction</td>
</tr>
<tr>
<td>Engl. 340Q</td>
<td>Major Plays of Shakespeare</td>
</tr>
<tr>
<td>Engl. 345</td>
<td>Studies in Comparative Literature</td>
</tr>
<tr>
<td>Engl. 360</td>
<td>Major British Writers I</td>
</tr>
<tr>
<td>Engl. 361</td>
<td>Major British Writers II</td>
</tr>
<tr>
<td>Engl. 362Q</td>
<td>American Writers of the 19th Century</td>
</tr>
<tr>
<td>Engl. 365</td>
<td>African-American Literature</td>
</tr>
<tr>
<td>Engl. 400G</td>
<td>The Literary Imagination</td>
</tr>
<tr>
<td>Fren. 223</td>
<td>Intermediate French</td>
</tr>
<tr>
<td>Fren. 300</td>
<td>Intermediate French</td>
</tr>
<tr>
<td>Germ. 223</td>
<td>Intermediate German I (P)</td>
</tr>
<tr>
<td>Germ. 344Q</td>
<td>Intermediate German II (P)</td>
</tr>
<tr>
<td>Greek 224</td>
<td>Intermediate Greek (P)</td>
</tr>
<tr>
<td>Hist. 311</td>
<td>History of Latin America I</td>
</tr>
<tr>
<td>Hist. 312</td>
<td>History of Latin America II</td>
</tr>
<tr>
<td>Hist. 313</td>
<td>English History I</td>
</tr>
<tr>
<td>Hist. 314</td>
<td>English History II</td>
</tr>
<tr>
<td>Hist. 317</td>
<td>The Holocaust</td>
</tr>
<tr>
<td>Hist. 320</td>
<td>Russian History Survey</td>
</tr>
<tr>
<td>Hist. 321</td>
<td>The Viet Nam Conflict</td>
</tr>
<tr>
<td>Hist. 340</td>
<td>World War II</td>
</tr>
<tr>
<td>Hist. 362</td>
<td>The Roman World</td>
</tr>
<tr>
<td>Hist. 501</td>
<td>The American Colonies</td>
</tr>
<tr>
<td>Hist. 502</td>
<td>The American Revolution and Early Republic</td>
</tr>
<tr>
<td>Hist. 503</td>
<td>The Age of Jefferson and Jackson</td>
</tr>
<tr>
<td>Hist. 504</td>
<td>Civil War and Reconstruction</td>
</tr>
<tr>
<td>Hist. 505</td>
<td>America's Gilded Age</td>
</tr>
<tr>
<td>Hist. 507</td>
<td>U.S. History: 1900 to 1945</td>
</tr>
<tr>
<td>Hist. 508</td>
<td>U.S. History: 1945 to present</td>
</tr>
<tr>
<td>Hist. 511</td>
<td>Women in Early America</td>
</tr>
<tr>
<td>Hist. 512</td>
<td>Women and Reform in America</td>
</tr>
<tr>
<td>Hist. 516</td>
<td>History of American Business</td>
</tr>
<tr>
<td>Hist. 517</td>
<td>U.S. Constitutional History I</td>
</tr>
<tr>
<td>Hist. 518</td>
<td>U.S. Constitutional History II</td>
</tr>
<tr>
<td>Hist. 521</td>
<td>U.S. Diplomatic History I</td>
</tr>
<tr>
<td>Hist. 522</td>
<td>U.S. Diplomatic History II</td>
</tr>
<tr>
<td>Hist. 525</td>
<td>American Military History</td>
</tr>
<tr>
<td>Hist. 528</td>
<td>The History of Wichita</td>
</tr>
<tr>
<td>Hist. 529</td>
<td>Indians of Kansas</td>
</tr>
<tr>
<td>Hist. 530</td>
<td>American Women in History</td>
</tr>
<tr>
<td>Hist. 531</td>
<td>American Environmental History</td>
</tr>
<tr>
<td>Hist. 533</td>
<td>The American City</td>
</tr>
<tr>
<td>Hist. 534</td>
<td>History of the Old South</td>
</tr>
<tr>
<td>Hist. 535Q</td>
<td>History of Kansas</td>
</tr>
<tr>
<td>Hist. 537</td>
<td>The Trans-Mississippi West</td>
</tr>
<tr>
<td>Hist. 538</td>
<td>The American West in the 20th Century</td>
</tr>
<tr>
<td>Hist. 541</td>
<td>Modern France</td>
</tr>
<tr>
<td>Hist. 545Q</td>
<td>The World Since 1945</td>
</tr>
<tr>
<td>Hist. 553</td>
<td>History of Mexico</td>
</tr>
<tr>
<td>Hist. 558</td>
<td>The Ancient Near East</td>
</tr>
<tr>
<td>Hist. 559Q</td>
<td>Greek History I</td>
</tr>
<tr>
<td>Hist. 560</td>
<td>Greek History II</td>
</tr>
<tr>
<td>Hist. 562</td>
<td>Roman History I</td>
</tr>
</tbody>
</table>
### General Education Requirements

<table>
<thead>
<tr>
<th>Basic Skills to be completed with a C or better (12 hours minimum)</th>
</tr>
</thead>
<tbody>
<tr>
<td>English Composition I and II</td>
</tr>
<tr>
<td>Oral Communication</td>
</tr>
<tr>
<td>Contemporary Mathematics, College Algebra, Precalculus Mathematics or another math class for which one of these is a prerequisite</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fine Arts and Humanities (12 hours minimum)</th>
</tr>
</thead>
<tbody>
<tr>
<td>One Introductory course: Art History, Dance, Musicology, Composition and Theater</td>
</tr>
<tr>
<td>Two Introductory courses, one chosen from each of two of the following disciplines: Communication*, English*, History, Linguistics, Modern and Classical Languages and Literature, Philosophy, Religion, Women's Studies</td>
</tr>
<tr>
<td>An Issues and Perspectives course in either Fine Arts or Humanities</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Social and Behavioral Sciences (9 hours minimum)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two Introductory courses, one chosen from each of two of the following disciplines: Anthropology, Economics, Geography, Minority Studies, Political Science, Psychology, Sociology</td>
</tr>
<tr>
<td>An Issues and Perspectives course in the Social and Behavioral Sciences</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mathematics and Natural Sciences (9 hours minimum)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two Introductory courses, one chosen from each of two of the following disciplines: Biology, Chemistry, Computer Science*, Geology, Mathematics/Statistics*, Physics</td>
</tr>
<tr>
<td>An Issues and Perspectives course in the Mathematics/Natural Sciences</td>
</tr>
</tbody>
</table>

---

* Nonprofessional courses only, and excluding Basic Skills.  
** Students must take one Issues and Perspectives course; no more than two Issues and Perspectives courses will count for general education credit.

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### Introductory Courses

Introductory courses in the disciplines which qualify for general education credit are identified with a caret (>) prefix in the **Catalog** and the **Schedule of Courses**.

#### Fine Arts Courses

- Art H. 121G, Survey of Western Art: Ancient
- Art H. 122G, Survey of Western Art: Renaissance and Baroque
- Art H. 124, Survey of Western Art: Modern
- Dance 140, Art of the Dance
- Mus. C. 160G, Heritage of Western Music
- Mus. C. 162G, World Music
- Thea. 143G, Art of the Theater

#### Humanities Courses

- Comm. 190G, Introduction to Human Communication
- Engl. 230G, Exploring Literature
- Engl. 232G, Themes in American Literature
- Fren. 210Q, Intermediate French (P)
- Germ. 220Q, Continuing German (P)
- Greek 223, Intermediate Greek (P)
- Hist. 100G, World Civilization since 1500
- Hist. 101G, Western Civilization to 1648
- Hist. 102G, Western Civilization from 1648
- Hist. 131Q, History of the USA: Colonial Period to 1877
- Hist. 132Q, History of the USA: 1877 to Present
- Latin 223, Intermediate Latin (P)
- Ling. 151G, The Nature of Language
- Phil. 100G, Meaning of Philosophy
- Phil. 125Q, Introductory Logic
- Phil. 144Q, Moral Issues
- Rel. 110Q, Old Testament
- Rel. 115Q, New Testament
- Russ. 210Q, Intermediate Russian (P)
- Span. 210Q, Intermediate Spanish (P)
- Wom. S. 190G, The American Woman
- Wom. S. 287Q, Women in Society: Social Issues

General education courses must be at least three credit hours and from the approved general education course list. All courses which qualify for general education credit have a caret (> prefix in the **Catalog** and the **Schedule of Courses**. Courses within a student's major department shall not count in fulfilling general education requirements. (This restriction applies only to one major. For students with a double major, courses in the second major could count in fulfilling their requirements.)
Stat. 576, Applied Nonparametric Statistical Methods (P)

Issues and Perspectives Courses
Issues and Perspectives courses in the disciplines which qualify for general education credit are identified with a caret (>) prefix in the course listings for departments/programs/disciplines in the Undergraduate Catalog and each semester's Schedule of Courses.

Fine Arts/Humanities Courses
Comm. 630, Communication Law and Responsibility (P)
Germ. 341, Germany in the European Context
Hist. 308, Lost Civilizations
Hist. 330G, The Americans
LAS 222Q, East Asia
LAS 300G, Peace and War
Mus. C. 310, Interrelated Arts (P)
Phil. 300G, Science and the Modern World
Phil. 302, Values and the Modern World
Thea. 385, Theatre as a Mirror of Today's America
Wom. S. 541, Women, Children, and Poverty (P)
Wom. S. 580N, Gender, Race, and Knowledge

Social and Behavioral Sciences Courses
Anthr. 201G, The American Hero
Econ. 250, Entrepreneurship and Personal Enterprise
Econ. 280, Economics of Social Issues
LAS 222Q, East Asia
LAS 300G, Peace and War
Pol. S. 232Q, Basic Ideas in Political Theory
Psy. 416Q, Psychology and Problems of Society (P)
Psy. 534, Psychology of Women (P)
Soc. 316, The American Male
Soc. 336, Work in Modern Society

Mathematics and Natural Sciences Courses
Biol. 310, Human Reproduction: Issues and Perspectives (P)
Biol. 370Q, Populations, Resources, and the Environment (P)
Chem. 301, Issues and Perspectives in Chemistry (P)
Geol. 300G, Energy, Resources, and the Environment
Math. 531, Introduction to the History of Mathematics (P)

(P) designates courses with prerequisites

Previous General Education Program
For students who entered the University prior to the Fall Semester of 1994, courses in the Undergraduate Catalog and the Schedule of Courses identified by a G or Q suffix qualify for general education credit. These general education requirements are stipulated in previous Undergraduate Catalogs.

Requirements for Graduation
The University's minimum graduation requirements for baccalaureate degrees are given below. Students should consult the appropriate section of the Catalog for additional graduation requirements imposed by the department and college of their major. Graduate students should consult the Graduate Bulletin.

Students are required to file an Application for Degree card in the office of the dean of their college at least two semesters before their expected date of graduation.

Students must have credit for 124 acceptable semester hours toward their degree. Hours of credit earned toward a degree do not include courses with grades of F, W,Au, NC, or I. In order to graduate in eight semesters, a student must take an average of 16 credit hours per semester.

Students must maintain an overall grade point average of 2.000 in the courses in their major field of study.

Students shall not be allowed credit toward graduation for D grade work in excess of one-quarter of their total hours.
Students must have a minimum of 40 semester hours of credit in courses numbered 300 or above.

Students transferring from a two-year college must complete at least 60 hours of four-year college work and 40 hours of upper-division work in order to qualify for graduation from Wichita State.

At least 30 semester hours of course credit (A, B, C, D, or Cr) must be earned at Wichita State. Also, at least 24 of the last 30 semester hours or 50 of the last 60 semester hours must be completed at Wichita State. Exception to this regulation may be made by the University's Committee on Admissions and Exceptions.

Students may transfer credits earned in correspondence or extension courses with the approval of their dean. However, no more than 30 semester hours of such credit may apply toward a bachelor's degree and no more than six hours of such credit may be among the last 30 semester hours.

Date of Catalog Requirements
Students who have not been out of college for more than two consecutive calendar years may graduate under the requirements in effect at Wichita State when they first entered any college or university. They also may graduate under the requirements of any subsequent Wichita State Catalog. They may not, however, be allowed to graduate under the requirements of a Wichita State Catalog in effect earlier than two years preceding their enrollment at Wichita State. Guest students are considered to have entered Wichita State at the time they become guest students and are subject to the preceding provisions.

If students, including nondegree-bound students and open admission students, have had their college program interrupted by more than two consecutive years, they will be subject to the requirements in effect when they reenter, or, if they elect the requirements of a later Catalog.

The Wichita State Catalog is in effect from the fall semester of the year it is published through the Summer Session of that academic year. The Catalog is a guide for information only and is not a contract.

Second Bachelor's Degree From Wichita State
Students with a bachelor's degree from another institution may receive a second bachelor's degree from Wichita State University upon completion of a minimum of 30 hours in residence, provided that none of the 30 WSU hours is counted in the first degree and provided that all Wichita State college and department graduation requirements are met.

Students who have received one bachelor's degree from Wichita State University may receive a second upon completion of a minimum of 30 hours in residence and upon satisfying the requirements from the department and college from which the second degree is sought. These hours are in addition to those required for the first degree.

Commencement
Wichita State holds one commencement a year. All summer, fall, and spring graduates are invited to participate in the May commencement exercises. Individual colleges hold recognition ceremonies following University commencement.

Special Academic Areas
Cooperative Education Program
Cooperative education is an academic program for undergraduate and graduate
students who wish to combine classroom studies with academically related paid employment. Cooperative education places students both locally and nationally.

By utilizing off-campus resources and expertise, cooperative education places students in business, government, industry, and social agencies. Programs are individually designed, enabling students to work directly with professionals in their field while expanding upon knowledge learned in the classroom. Opportunities may occur for students to refine research methods, apply theories in actual field settings, work with advanced technology, and design original projects and research.

Students hired in cooperative education positions must enroll in specially designated co-op courses and work with a faculty advisor from within the appropriate departments. Each placement is assessed by the faculty advisor for its potential to provide learning experience relevant to the student's professional and educational goals.

Academic credit may be earned through co-op placements as determined by the student's faculty advisor. During the work period, students are expected to meet project requirements assigned by their advisor. Academic credit generally counts toward University degree requirements.

Cooperative education offers both alternating and parallel placements. Students who select the alternating option must complete a semester of full-time enrollment in course work before entering a second alternating position. Alternating placements carry the status of full-time students and enjoy the accompanying privileges.

Students selecting the parallel option are required to carry a minimum of six hours of course work in addition to their co-op course. Students may enroll in parallel co-op positions during consecutive semesters as long as faculty sponsors determine that meaningful learning experiences exist.

Requirements for co-op participation vary within the different colleges and departments. Requirements for admission to the co-op program generally include completion of 24 credit hours and satisfactory academic standing. Interested students should contact the Cooperative Education Office in 125 McKinley Hall or phone (316) 978-3688. Students are required to complete an application for admission, attend orientation, and sched-ule an interview with the appropriate co-op coordinator.

Division of Academic Outreach
One of the four basic objectives of Wichita State is to provide continuing education opportunities. The Division of Academic Outreach's programs and activities are directed toward meeting higher education needs throughout the Wichita area and the state.

Major functions of the division include:
1. Support the teaching mission of WSU's degree-granting colleges by providing credit courses and academic support services (alternative information sources, admission and registration procedures, etc.) at off-campus centers in Wichita and Sedgwick County, particularly at WSU's three service centers downtown, in west Wichita, and in south Wichita.
2. Cooperate with the Media Resources Center to provide regular WSU credit courses using electronic delivery systems such as cable television, video, or microwave transmission for the convenience of people who find it difficult to come to the campus on a regular basis.
3. Work with business, industry, other area institutions, and the professions to provide specialized credit and noncredit classes, degree completion programs, conferences, opportunities to the community, including contracted customized training for area employers.
4. Administer the University's program of scholarships for part-time students.
5. Supervise and coordinate internship and cooperative education opportunities for students.
6. Coordinate reception of national teleconferences to make distant expertise and resources available to the University and community.
7. Provide planning and support services to continuing education centers and units within the individual academic colleges, maintain institutional records of academic extension activities, and provide reports on these activities to the Kansas Board of Regents.

Graduate School
About 3,000 students at Wichita State are enrolled in the Graduate School. The Graduate School offers programs leading to master's, specialist, and doctoral degrees. Master's programs are offered in accounting, administration of justice, aerospace engineering, anthropology, art education, biological sciences, business, business administration, chemistry, communication, communicative disorders and sciences, computer science, counseling, creative writing, curriculum and instruction, economics, educational administration and supervision, educational psychology, electrical engineering, English, geology, gerontology, history, industrial engineering, environmental science, liberal studies, mathematics, mechanical engineering, music, music education, nursing, physical education, physical therapy, physics, political science, public administration, public health, sociology, Spanish, special education, sports administration, and studio arts. The Specialist in Education, a degree beyond the master's level, is awarded in school psychology. Doctoral programs are offered in applied mathematics, chemistry, communicative disorders and sciences, aerospace, electrical, industrial, and mechanical engineering; educational administration, and human factors and community/clinical psychology.

For complete information on the graduate programs see the Wichita State University Graduate Bulletin.

Summer Session
During its Summer Session—the largest in the state of Kansas—Wichita State continues its commitment to quality education. All of the University's academic divisions operate during the Summer Session, and credit toward both graduate and undergraduate degrees may be earned. More than 300 faculty teach more than 1,000 regular and short courses; the standards of achievement are identical with those of the academic year. Credits earned in the Summer Session are accepted by all colleges accredited by or belonging to the associations that accredit the University.

Courses are offered in a variety of formats. A two-week pre-session precedes two four-week sessions which are concurrent with the regular eight-week session. Both day and evening classes are offered.

For information regarding dates for the various sessions, dates of enrollment and course offerings, contact:
Director of the Summer Session
Wichita State University
1845 Fairmount
Wichita, Kansas 67260-0013
(316) 978-3010

Admission and Enrollment
The rules governing admission to the Summer Session are the same as those for the regular academic year. (See the Admission to Wichita State section of the Catalog.)
A general registration enrolls students just before the eight-week and first four-week sessions. Separate registrations also are held for each of the short sessions. Detailed information on registration is available in the Summer Schedule of Courses.

The fees for the Summer Session are the same as those for the regular academic year. (See the Financial Information section of the Catalog.)

Special Summer Programs

Workshops. Workshops devoted to current topics are offered throughout the summer. Typical courses include workshops for teachers in the areas of business, education, and fine arts; courses in current health issues; an entrepreneurship workshop for people considering creating a small business; and field study in topics such as the floral ecology of the Rocky Mountains, the Osage culture in Oklahoma, or a wilderness experience in a national park. A list of the workshops being offered each summer is included in the Summer Schedule of Courses. Special fees are charged for workshops. (See the Financial Information section of the Catalog.)

High School Students. High school students between their junior and senior years may enroll as guest students for college credit in many WSU classes. Other summer opportunities at Wichita State for high school students include sports camps in basketball, baseball, and volleyball; a drum major and twirler camp; and enrichment courses for career exploration.

Study Abroad Programs. Wichita State offers organized study abroad programs in Mexico and France, described below. Additionally, students can individually study abroad for up to four hours of credit. For more information, contact the Office of International Programs, 303 Grace Willkie Hall.

Exchange Program with the University of Orleans. Wichita State University has a special exchange program with Wichita's French sister city, Orleans. Through this exchange program, students pay their tuition and fees at WSU and do academic work in their chosen field at the Universite d'Orleans. Orleans also offers a four-week summer program in which students may earn up to six hours of credit transferable to WSU. Students pay their fees directly to Orleans when enrolled in the summer program. For more information, contact the Department of Modern and Classical Languages and Literatures, 305 Jardine Hall.

Summer Program in Strasbourg, France. Students of French can improve their fluency and broaden their understanding of French culture in the five-week summer program in Strasbourg, France. Students with a minimum of one year of university French or the equivalent are eligible to participate. Students live in university housing and attend intermediate through graduate level courses in French language, culture, and literature. Up to six hours of credit may be transferred to WSU. For more information, contact the Department of Modern and Classical Languages and Literatures, 305 Jardine Hall.

Spanish Program in Puebla, Mexico. The Department of Modern and Classical Languages and Literatures offers a program designed to broaden students' comprehension of the language, customs, history, and culture of Mexico.

Six hours of undergraduate or graduate credit may be earned by those who complete the six-week course. For more information, contact the Department of Modern and Classical Languages and Literatures, 305 Jardine Hall.

Field Geology. Wichita State and Kansas State universities present a joint summer field course in geology. The base camp is Beulah, Colorado, on the east flank of the Wet Mountains. The summer course consists of five weeks in the field, for which students receive six hours of credit.

Applicants should have completed course work in physical and historical geology and at least 12 hours of advanced geology, preferably including a field methods mapping course. Inquiries should be directed to the Department of Geology, 228 McKinley Hall.

Conferences and Noncredit Programs

The Office of University Conferences and Noncredit Programs provides noncredit continuing education opportunities by developing conferences which disseminate current research, technology transfer, and effective teaching strategies to statewide, regional, and national audiences for colleges within the University. Other conferences are organized in response to the expressed needs of off-campus organizations. These educational events are developed to provide professional accreditation as well as public service education.

The three major functions of the Office of University Conferences are to administer the University Conference Policy; to serve as the reporting liaison between the University, the Board of Regents, and other Regents' institutions for all noncredit activities conducted throughout the University; and to administer the Marcus Center for Continuing Education which serves as the University's conference center and provides a program of noncredit personal growth and development courses.

Financial Information

Tuition and fees cover less than one-third of the cost of an education at Wichita State. The remaining expenses are paid out of donations made to the Wichita State University Endowment Association and from appropriations from the State of Kansas.

Comprehensive Fee Schedule

Fees given in this Catalog were proposed for 1998-99 and may be changed by the Kansas Board of Regents or the Kansas Legislature.

Basic Fees

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

<table>
<thead>
<tr>
<th></th>
<th>Resident</th>
<th>Nonresident</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undergraduate tuition</td>
<td>$64.35</td>
<td>$274.40</td>
</tr>
<tr>
<td>Per credit hour</td>
<td>$19.50</td>
<td>$19.50</td>
</tr>
<tr>
<td>Undergraduate student fee</td>
<td>$19.50</td>
<td>$19.50</td>
</tr>
<tr>
<td>Registration fee—all students</td>
<td>$15.00</td>
<td>$15.00</td>
</tr>
<tr>
<td>Graduate tuition</td>
<td>$95.95</td>
<td>$320.45</td>
</tr>
<tr>
<td>Per credit hour</td>
<td>$19.50</td>
<td>$19.50</td>
</tr>
<tr>
<td>Graduate student fee</td>
<td>$19.50</td>
<td>$19.50</td>
</tr>
</tbody>
</table>

*Tuition and fees are for the Fall and Spring semesters and Summer Session. Tuition includes $1 per credit hour for technology equipment.

The student fee, required of all students enrolled on the Wichita State campus, supports the Educational Opportunity Fund, parking, student union, athletics, Heskett Center, bowling programs, student health services, forensics, Student Government Association, University Forum Board, student publications, and other student activities.

Off-Campus Regular Enrollment, Continuing Education Credit Courses, and Workshop Fees

A specific course fee of $84 (undergraduate) or $124 (graduate) per credit hour is assessed for off-campus courses.

Workshop Fees—On Campus

A workshop fee of $93.35 per credit hour, including tuition and student fees, is assessed. Fees for noncredit workshops
are based on actual operating costs. In addition, there is a $15 registration fee per semester.

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

Departmental or College Fees
Special departmental fees are charged as summarized below:
1. Students are required to reimburse the University for the cost of excess breakage, wastage of materials, and materials used in excess of those required for completion of course work.
2. Dance program fee (Dance 201, 210, 301, 310, 401, 410, 501, and 510)—$12 per semester for course
3. Engineering equipment and maintenance fee—$14 per credit hour for engineering courses
4. Geology Field School—actual costs per semester
5. Physical education (bowling)—$45 per semester
6. Physical education (bowling), PE 201B—$10 per course
7. Physical education (horsemanship)—$110 per semester
8. Physical education (scuba diving)—$55 per semester; Physical Education Scuba Trip—$770 for student; Physical Education Advanced Open Water Diver Fee—$159 per student
9. Physical education (pool/billiards)—$25 per semester
10. Physical education (ice skating)—$78 per semester
11. Physical education (water sports)—$125 per semester
12. Physical education (golf Westside)—$45 per semester
13. Physical education (safety and marksmanship)—$125 per semester
14. Physical education (CPR and first aid certification)—$10 per certification
15. College of Health Professions
   Nursing entrance test fee $14/person
   Physical therapy application fee $20/person
   Physician assistant application fee $20/person
   Acceptance fees:
   Dental hygiene $100/person
   Medical technology $100/person
   Physical therapy $100/person
   Physician assistant $100/person
16. W. Frank Barton School of Business
   Executive MBA $18,400/person

*Acceptance fees are due within 30 days after admission to a program and are nonrefundable. The fee will be applied toward the tuition of the first semester of the program.

Free Music Courses
During the academic school year, students enrolled in the following ensembles will not be charged tuition and fees:
   Wind Ensemble
      Mus. P. 210B, 410B, and 710B
   Orchestra
      Mus. P. 211A, 411A, and 711A
   Band (Symphony)
      Mus. P. 211B, 411B, 711B, and 711C
   Band (Concert)
      Mus. P. 212B, 412B, and 712B
   University Singers
      Mus. P. 211F, 411F, and 711F
   Jazz Arts Ensemble
      Mus. P. 211T, 212T, 411T, 412T, 711T, and 712T
   A Capella Choir
      Mus. P. 212F, 412F, and 712F
   Concert Chorale
      Mus. P. 213F, 413F, and 713F

Special Fees, Deposits, and Waivers
Certain other fees are assessed as indicated below:
   Math placement test fee $4 per student
   Scholarship search fee:
      Currently enrolled students $10/person
      Non-WSU student $15/person
   Undergraduate admission application fee, initial enrollment $20/person
   Graduation admission application fee, initial enrollment $25/person
   Media course fee $12/credit hour
   English composition placement fee $4/person
   Installment payment administration fee $30/person
   Diploma replacement fee $20/copy
   International undergraduate student application processing fee $50/person
   International undergraduate student application fee $50/person
   International undergraduate student reapplication fee $25/person
   Transcript/certification fee (non-enrolled persons) $5/copy
   Copies of public documents $0.10/page
   Library fines and lost materials—cost per fine schedule or cost of replacement of material plus a processing fee
   Returned check fee $15/check
   Testing and credit by examination fee:
      Experiential learning assessment fee $25/person
      Departmental examination fee $8/credit hour

Late registration fee
   Through 20th day $10/registration
   After 20th day $25/registration
   Music instrument use fee $15/semester
   Equivalency examination fee $8/credit hour

Career services:
   Registration fee
      Students $20/6 mos.; $25/year
      Nonstudents $35/6 mos.; $50/year
   Counseling
      WSU students and alumni who graduated in past 2 mos. no charge
      Family of WSU faculty/staff $20/hour
      Alumni $20/hour
      Community people $40/hour
   Credential mailings $3/mailing

Testing
   Campbell Interest:
      Skill Survey $10/test
      Strong Interest Inventory $10/test
      Self-Directed Search $10/test
   Missouri Card Sort $10/no charge
   Myers-Briggs Type Indicator $10/test

Period of Payment
All semester fees, including laboratory fees, must be paid in full at registration.

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.

Assessment and Collection
The University Controller is responsible for the assessment and collection of fees. The Controller, the associate dean of the College of Engineering, and a faculty member from the W. Frank Barton School of Business constitute the Board of Appeals for students who believe their fees have been incorrectly assessed. The decision of this committee is final. Forms to initiate this process are available in the Registrar’s office.

Housing and Residence Life Fees
Housing rates at Wichita State University vary with the choice of facility and meal plan. Housing costs for Fairmount Towers, Brennan Hall, and Wheatshocker Apartments are listed below. The listed rates do not include a $35 nonrefundable application fee. A $10 late fee will be charged if a payment is not received by the fifth day after the due date. An installment payment plan is available for Bren-
nan Hall and Fairmount Towers for an additional fee of $5 per payment. Single rooms are available at Fairmount Towers and Brennan Hall for an additional fee of $5 per payment. Rates include water, gas, electricity, local telephone service, basic cable TV service, parking, and access to computing services. All facilities are air-conditioned.

Rates are for fiscal year 1999. Fees may be changed by the Kansas Board of Regents.

**Fairmount Towers**
*Rates are for August 16, 1998, through May 15, 1999.*

<table>
<thead>
<tr>
<th></th>
<th>Double</th>
<th>Single</th>
</tr>
</thead>
<tbody>
<tr>
<td>19 basic meal plan*</td>
<td>$3,945</td>
<td>$5,766</td>
</tr>
<tr>
<td>15 basic meal plan*</td>
<td>$3,865</td>
<td>$5,686</td>
</tr>
<tr>
<td>10 basic meal plan*</td>
<td>$3,764</td>
<td>$5,585</td>
</tr>
</tbody>
</table>

*You may also choose a “max meal plan” by picking any of the three basic plans and adding $100 to your account as a declining balance.

**Brennan Hall**
*Rates are for August 16, 1998, through May 15, 1999.*

<table>
<thead>
<tr>
<th></th>
<th>Double</th>
<th>Single</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard, 398-449 sq. ft.</td>
<td>$1,890</td>
<td>$3,308</td>
</tr>
<tr>
<td>Large, 501-513 sq. ft.</td>
<td>$2,034</td>
<td>$3,560</td>
</tr>
<tr>
<td>X-Large, 545-554 sq. ft.</td>
<td>$2,127</td>
<td>$3,749</td>
</tr>
</tbody>
</table>

**Brennan Honors Hall**
*Rates are for August 16, 1998, through May 15, 1999 and include a 5-meal plan.*

<table>
<thead>
<tr>
<th></th>
<th>Double</th>
<th>Single</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard, 398-449 sq. ft.</td>
<td>$2,590</td>
<td>$4,008</td>
</tr>
<tr>
<td>Large, 501-513 sq. ft.</td>
<td>$2,734</td>
<td>$4,260</td>
</tr>
<tr>
<td>X-Large, 545-554 sq. ft.</td>
<td>$2,827</td>
<td>$4,449</td>
</tr>
</tbody>
</table>

*The 5-meal plan is minimum; residents may choose any of the Fairmount Towers meal plan options.

**Wheatshocker Apartments**
*Rates are per month and effective June 1, 1998 through May 31, 1999.*

1. Studio, one bath, 373 sq. ft. $380

2. Corner, four bedrooms, one bath, 812 sq. ft.
   2.1 One person or family $824
   2.2 One person in large two bedroom unit $846
   2.3 Two people in large two bedroom unit, each pays $432
   2.4 One person in small two bedroom unit $360
   2.5 Two people in small two bedroom unit, each pays $190

3. Four bedrooms, one bath, 674 sq. ft.
   Unfurnished
   3.1 One person or family $720
   3.2 One person in two bedroom unit $360
   3.3 Two people in two bedroom unit, each pays $190

   Furnished
   3.4 One person or family $800
   3.5 One person in two bedroom unit $400

3.6 Two people in two bedroom unit, each pays $200

4. Two bedrooms, two baths, 1,100 sq. ft.
   4.1 One person or family $936
   4.2 Two students, each pays $468
   4.3 Three students, each pays $312

5. Two bedrooms, one bath, 733 sq. ft.
   5.1 One person or family $665
   5.2 Two students, each pays $333

Accessible units—medical documentation may be required

1A. Studio, one bath, 373 sq. ft. $380
2A. One bedroom, one bath, 627 sq. ft. $546
3A. One bedroom, one bath, 517 sq. ft. $520
4A. Corner bedroom, one bath, 541 sq. ft. $520

Notes:
1. Numbers correspond to room layouts on the Wheatshocker Apartments brochure.
2. Studio apartments (#1) are reserved for married couples.
3. Rates include all utilities—heat, air conditioning, water, trash collection, local telephone, and basic cable.
4. You are responsible for the entire contract amount unless you sign up for your room with a roommate.
5. If the room will be shared by more than one person, both (all) persons must request to room together. All application materials should be submitted together.

Students who cancel their contracts after occupancy but remain enrolled at WSU will be charged for weeks in residence and assessed a cancellation fee of $150 plus 50% of the remaining balance of the contract. The cancellation fee is subject to appeal.

**Summer Session Housing**
For the summer, all freshmen live in Brennan Hall because Fairmount Towers is not available. If you are not a freshman, you may live in either Brennan or Wheatshocker. Rates are quoted for double-occupancy and for single-occupancy. Single rooms will be granted only if space is available. You may contract for summer housing for varying periods of time, including pre-session only, pre-session and first four-week session, second four-week session, eight-week session, and eight-week session. For 1999 summer rates, call Housing and Residence Life, (316) 978-3693.

**Contracts and Compensatory Charges**
The schedule of fees reported here does not limit the charges that may be collected under arrangements with other governmental or private agencies except that such arrangements may not provide for lesser charges. Tuition or other charges to more nearly cover actual costs of instruction are specifically authorized.

No tuition is charged students enrolled in instructional programs for which the entire cost, including faculty, is financed by governmental or private agencies. Students enrolled in such programs on campus must pay all required student fees.

**Refund Policy—Complete and Partial Withdrawal**
Students making a complete or partial withdrawal before classes start and during the first week of classes (or through the third day of classes in the eight-week Summer Session) are entitled to a 100 percent refund of tuition and fees. Students making a complete or partial withdrawal during the second week of classes (or through the end of the first week of classes for the eight-week Summer Session) are entitled to a 80 percent refund of tuition and fees. Students making a complete or partial withdrawal during the fourth or fifth week of a semester (or through the end of the fourteenth day of classes in the eight-week Summer Session) are entitled to a 60 percent refund of tuition and fees. Students making a complete or partial withdrawal during the fourth or fifth week of a semester (or through the end of the thirteenth day of classes in the eight-week Summer Session) are entitled to a 40 percent refund of tuition and fees. No refund is made to students who withdraw after the fifth week (third week in the eight-week Summer Session). Refunds are made by the Controller's Office in keeping with this refund policy.

The Dean of Undergraduate Studies and Student Services, the University Controller, and the Dean of Education constitute the Board of Appeals for students who believe that an exception should be made to the refund policy. The decision of this committee is final. Forms to initiate this process may be obtained in the Controller's Office and must be returned to the Controller's Office.

Classes and credit workshops meeting for a period other than the regular academic term will refund 80 percent during the first 10 percent of class time, 60 percent during the next 10 percent of class time, 40 percent after the next 10 percent of class time, and no refund thereafter. Refunds on noncredit workshops will be made only on cancellations received 48 hours prior to the time of the scheduled workshop.
To withdraw completely from the University, students must process drop cards for all classes in which they are enrolled and surrender their Certificate of Registration.

Tuition Waiver for Kansas Teacher of the Year

Kansas Teacher of the Year recipients are allowed to enroll tuition free in up to nine credit hours annually provided the individual is 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.

Student Fee Waivers for Institutional Personnel

Student fees shall be waived for all Wichita State University personnel (except student employees) who have full-time appointments and for adjunct faculty members who provide services without pay. Student fees shall be waived for employees and lecturers who do not have full-time appointments and are not carrying full-time loads (undergraduates, 12 hours; graduates, 9 hours). These University employees must have an appointment for the semester in which the student fee waiver is applicable.

Drop/Add Fee Policy

Students who drop credits and do not add credits will be charged the proportional percentage based on the week they drop the credits. This remains the same as reflected in the Schedule of Courses.

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

a. The drop and add occurs in one transaction
b. There is an equal number of credit hours added as are being dropped.

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

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 nonmilitary refund policy. Room and board charges will be prorated to the extent that services have been provided.

Unpaid Fees

Students who leave Wichita State University without meeting financial obligations to the University will have their records impounded by the Registrar. 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.

Student Health Services Fees

Certain fees for laboratory tests, inoculations, prescriptions, x-rays, physical examinations, and other procedures are charged to users of Student Health Services. These fees reflect direct charges to the University and every attempt is made to keep them below market cost.

Senior Citizen Fee Waiver

In accordance with the Kansas Board of Regents' policy, students who are 60 years of age or older may enroll as auditors (noncredit) in any academic credit course in which space is available without paying tuition and fees. Senior citizens must present a Medicare card or Social Security card to demonstrate their age. A special senior citizen registration is held after the first day of classes (see the Schedule of Courses).

Senior citizens desiring college credit or the assurance of space in specific courses may enroll and pay full fees during regular registration. Course prerequisites apply to senior citizens as well as other students.

Financial Assistance

Wichita State offers financial assistance through scholarships, federally supported programs, and employment. Students interested in any type of financial assistance should contact the University’s Office of Student Financial Planning and Assistance, 203 Jardine Hall, to see what assistance is available for their specific needs. Most financial assistance is based on family need, but some scholarships are awarded without consideration of financial need.

Scholarships. The Board of Trustees of the University, in cooperation with the Kansas Board of Regents, administers a large number of scholarships and loans coming from endowed property and funds of the University.


The Office of Student Financial Planning and Assistance provides services to veterans and active duty people. The services span the entire range of benefits and include certification for benefits to the VA, tutorial assistance, financial assistance information, and work-study for veterans.

Wichita State University is designated a Serviceman’s Opportunity College.

Employment. Students enrolled in at least three hours may be eligible for part-time employment at the University. Federal work study employment is based on enrollment in at least six hours and the University requirements. Students may find employment as academic assistants, clerical assistants, technical assistants, custodial or food service assistants, or library assistants. For information about student employment contact the Office of Career Services, 203 Grace Wilkie Hall.

Endowment Association

The Endowment Association of Wichita State University is the appropriate channel for fund raising at the University. The coordination of all fund raising activities is conducted through the Endowment Association (Development Office) under the direction of the Executive Director of Development.

All investments and bookkeeping responsibilities with regard to gifts to the University are handled through the Endowment Association. A computerized system provides comprehensive recording of all gifts.

Endowed Scholarships and Grants

Wichita State University has been fortunate to receive donations submitted in the names of the following individuals. Many are past graduates, faculty, friends, and administrators of the University who wish to assist future graduates in financ-
ing their years at Wichita State University. The scholarships listed have a minimum principle of $2,500, are funded through the proceeds of the gifts from these individuals, and play a vital role in the University’s attempt to meet the full needs of students requiring financial assistance.

Recipients must meet the specific requirements of the scholarships each semester. In addition, all recipients of designated scholarships are encouraged to write an appropriate letter of appreciation to the donor.

Endowed scholarships are funded from earnings on donor endowment funds. The principal of these funds are never expended, therefore scholarship funding is available in perpetuity.

Endowed scholarships and respective departments include:

**Business**

Jerry and Jan Aaron, business
Air Capital Alumni, Alpha Kappa Psi
Fred and Mary Aley, business
Allen Family, business
Jack Austin, business
Donna Jabara Baker, entrepreneurship
W. Frank Barton, business
W. Frank Barton, entrepreneurship
Walter H. and Olive Ann Beech, business
V. Jerry Blue, entrepreneurship
Byron W. Boothe Memorial, entrepreneurship
Thomas Borden Branson Memorial
Beverly and Daniel Carney, entrepreneurship
Mike Cheesman, business
James Chubb, economics
Rick P. Clinton, business
Leland F. Cox, business
Paul T. and Mary Jane Curry, entrepreneurship
Urban Denker, real estate
Cecil W. and Helen J. Dorman, business
Charles S. Evenson, business
Howard Frazier Memorial, business
Gene Friedman, business/entrepreneurship
Gerald Graham, entrepreneurship
David F. and Mary L. Gunter
Peter B. Hoidale, entrepreneurship
Richard H. Homburger Award for Excellence, business
Charles and Nina Kirby Jones, liberal arts/business
Marvin B. Kaufman Memorial, business
Curtis D. and Kay P. LaGree
Herbert P. Lindsley Memorial, business
Anita Lusk, business
Marcus Family, entrepreneurship
Russell W. Meyer
W.A. Michaelis, Jr.
Frank H. Miller, accounting
Frank A. Neff Memorial Award, business
Nightingale
Kenneth Northcutt Memorial, business
Overstreet, business
Marilyn and Kenneth Pauly
John N. Payne, business
Petroleum Accountants Society of Kansas, accounting
Geraldine Rathbone, business
Richard and Jean Reidenbaugh, entrepreneurship
Austin and Arline Rising, aviation management
Carroll Lunceford, accounting
Robert David, accounting
Walter L. Stauffer, real estate
Nora S. Stosz Memorial, business
Nestor R. Weigand and Hobart C. Brady, real estate

**Wichita Oil Secretaries Association, business**

J. Roscoe Williams, business
Frances O. Woodard, economics
Ira Dean and Dixie Worden, business

**Education**

Dale and Leona Alley, curriculum and instruction
Archie G. and Gladys A. Anderson, education
James E. Anderson, Sr., education
Robert E. Anderson-Leonard M. Chaffee, education
Josephine Brown, education
Curriculum & Instruction Faculty & Alumni, education
Sid Faires Memorial, education
Floyd M. Farmer, education
Josephine Fugate, education
Kenneth and Nadine Gleason, education
Grand Army of the Republic, logopedics
David F. and Mary L. Gunter
Herbert J. Hannam, education
Dr. Robert Holmer, education
Elinor Wells Kessling
Vera M. Linn, education
Charles and Amy Mahin, English/education
Margaret Craig Meek Memorial
Nancy C. Millett, education
Sid F. Moore, teacher education
Ruth and C. Henry Nathan
John M. and Nelda Nickel, education
O. Carroll and Nelle Noel Memorial, curriculum and instruction
Nygaard Family Scholarship, physical therapy/education
Robert T. Pate, education
Physical Education Alumni
Geraldine Rathbone, education
Linwood Sexton, elementary education
Sam and Rosemary Sherr, communicative disorders
F. Yvonne Slingerland, physical education
Gladys Taggart, physical education
Helen J. Throckmorton, English
Andrea Uleberg, education
Bill Umphrey, physical education
David Wainwright Memorial, ROTC
J. Martyn Walsh, English education
Vernon and Marjorie Williams, physical education
Verda Colaw Memorial, engineering

**Engineering**

Ric Abbott, aeronautical engineering
Dr. Wayne Becker Memorial, engineering
Walter H. Beech, aerospace engineering
Walter H. Beech and Olive Ann Beech, engineering

**Verda Colaw Memorial, engineering**
Claude A. Foltz, aerospace engineering
Donald L. Hommerzheim Memorial, industrial engineering
Earl R. Hutton, engineering
John C. and Maude James, engineering
Bruce and Connie Peterman
Alex and Genevieve Petroff Memorial, aerospace engineering
Edgar Stewart, engineering
H.W. Sullivan Award, engineering
James Ray Trapp Memorial, engineering
Richard and Bettye Tumlinson, engineering
Harold J. Varhanik, engineering
Dwane and Velma Wallace, engineering
Women's Aeronautical Association, engineering

Fine Arts
Mildred "Mickey" McCoy Armstrong, fine arts
Earl Richard Backus, music
James Kerr Bandman, music
Jay and Lilian Kornfeld, music
Ju-Jiaenne Weaver Masters, theatre
June M. Lair Endowment for the Arts, general
James W. and Mildred S. Koci, music
James Ray Trapp Memorial, engineering
John Sarah Shirkey Gietzen, opera
George and Brenda Fairman Endowed Scholarship, general
Eleanor Doty Gair
Larry Gile Memorial, violin
Melba Cornwell Budge, piano
Raymond LeClair Budge, art
Betty Van Arsdale Burns, fine arts
Marjorie Calkins Memorial, music
Vincent Canzonieri, music
James Ceasar, music
Eleanor Doty Clair
Cramer Fund for Art, art
Walter J. Duersken, music
Howard E. Ellis, music
Gordon W. Evans Instrumental, music
George and Brenda Farha Endowed Scholarship in Opera
Louise Findlay, music
Martha Fleming, dance
Morris and Mary Garvin, music
Sarah Shirkey Gietzen, opera
Lary Gile Memorial, violin
Henry and Helen Gott, music
Roger A. and Patricia K. Hart, music
Larry Hartmann, music
Hermiondean Houtch, music
Max E. and Lois J. Hubbard, music
Frank and Margaret Kessler, music
Robert M. Kiskadden, art
James W. and Mildred K. Koci, music
Jay and Lillian Kornfeld, music
June M. Lair Endowment for the Arts, fine arts
Martha Neveling Langlois Endowed Violin Scholarship, fine arts
Thurlow Lieurance, music
Marcus Family Endowed Scholarship for Excellence
Ronald D. Mason Scholarship, French horn
Juliaenne Weaver Masters, theatre

Audrey Needles, performing arts
Henry J. and Tina Nickel, fine arts
Wallace H. Paddock, art and design
Adrian Poulson, music
Ruth ann Reagan, music
Mark Rindt Memorial, band
James P. Robertson, music
Sawallis Award for Excellence, fine arts
John Schneider, music
Sigma Alpha Iota, music
Elizabeth Parrott Skaer, music
Billie Smith, choral music
Clayton Staples, art
Kim Stephens Memorial, excellence in dance
Mary Jane Teall, theatre
Gordon B. Terwilliger, fine arts
Thursday Afternoon Music Club/Holman Flute Scholarship
Thursday Afternoon Music Club/Mabel and Milo Wright, fine arts
Vocal Performance Majors, music
George Wilner, drama
Elmer and Mabel Worthington, music
Paul R. Wunsch, music

General
Clark and Rowena Ahlberg, general
Alumni Awards, general
A.J. and Jean Bachas, general
Hazel M. Barfoot Memorial
Big Brothers—Big Sisters of Sedgwick County, general
Margaret F. Gillespie Brehm, general
J.W. and Hazel Brown Memorial, general
Marvin G. Brown Football Memorial, general
Louisa Byington, general
Van Dilla Chapell, general
Mr. Vernon Chase Endowed Memorial
Donald G. Christian Football Memorial, general
Christmas Card Scholarship, general
Class of 1927, general
Daisy Stever and Lisle Stephan Congdon, general
Council of University Women
Edith and Harry Darby Foundation, general
Constance Louise Routt Decker—Kansas Society Daughters of the American Revolution, general
John W. Duren Football Memorial, general
Paul V. Elliott, general
Virginia Murphy Engel Memorial, general
Helen Johnson Frank, general
Friends of Delta Upsilon, general
Glen Gardner, general
Jeanne Brooks Gart
Mabel Fay Gillespie, general
R.L. Gillespie, general
Jacob and Molly Glickman, general
Harry Gore, general
Charles and Helen Graves, general
Benjamin F. Hammond, general
Eva C. Hangen Delta Gamma, general
Francis and Dorothy Harmon
Martin E. Harrison Football Memorial, general
Deborah G. Haynes and R. Larry Beamer
Jack and Jeri Hinkle
Evelyn A. Hinton, general
Myrl Houck, general
Frank C. Isely, general
Col. James J. Jabara, general
J.R. and Inez Jay, general
Nicola S. Jimenez Memorial, general
Ronald G. Johnson Football Memorial, general
Kansas Regents Honor Academy, general
Randall B. Keisau Football Memorial, general
John F. Kennedy Memorial, general
Mallory W. Kimmel Football Memorial, general
Carl R. Krueger Football Memorial, general
Lawrence A. and Alma A. Fray Lallement and Maurice I. Lallement
Robert and Dorothy Langenwalter, general
L'il Egie, general
George David Lodge
William O. Long, general
Sam and Milly Marcus, general
Estella Martinez
Lenora N. McGregor, general
Veta McMahon Memorial
Men of Webster, general
Pearl J. Milburn, general
Sophia Berman Molk Scholarship, general
Stephen A. Moore Football Memorial, general
NationsBank, general
Olive Baker Nease, general
Thomas B. Owen, Jr., Football Memorial, general
John W. Page, general
Mabel A. Putnam, general
J. Dean Rickman, general
Nettie and J.W. Rickman, general
Eugene Robinson Football Memorial, general
Vera Hutton Seams, general
Linwood Sexton
Thomas T. Sheddah Football Memorial, general
Soroptimist of Wichita, general
Sorosis Alumni Award, general
Richard N. Stines Football Memorial, general
Swett Prize, general
John R. Taylor Football Memorial, general
Mike Taylor
To improve its fiscal stability, Wichita State University has developed a permanent endowment fund to provide ongoing income support for University programs and activities.

Endowment funds are invested in stocks, bonds, and other financial instruments. Five percent of the fund balance is distributed annually for University programs according to the donor’s intended purpose. Unspent earnings are reinvested as principal to protect the value of the endowment against erosion by inflation.

Every donor automatically becomes a member of a University gift club:

- **Friends** $1-$499
- **Harvest Club** $500-$1,999
- **President’s Club** $2,000 annual
- **Delmar D. Klocke** $20,000 annual
- **Fairmount Society** $20,000 life
- **$500,000 deferred

Donors who contribute an irrevocable deferred gift are eligible for life membership in the President’s Club or Fairmount Society at age 62.

**Current Scholarships**

Current scholarship dollars are contributed annually by donors. Funds to support these scholarships come from annual gifts rather than earnings and therefore all of the scholarships listed may not be available every year.

Current scholarships and respective departments include:

**Business**
- Alumni of Arthur Andersen and Co.
- Boeing Scholarship
- John H. and Mary Ann Bomgardner
- Joseph H. and Marvelyyn R. Burnett, accounting
- Business-Alumni

**Engineering**
- Olive Ann Beech/Pratt & Whitney
- Lincoln, aerospace
- Boeing Scholarship
- J.I. Case
- Cessna Foundation Scholarships
- Delmar D. Klocke
- NSPE State of Kansas

**Fine Arts**
- Olive Ann Beech
- Walid Ghomieh, music
- James L. Hardy, music
- Hayter-Davis, voice
- Mary R. Koch
- Forrest Lattner, orchestra
- Lee Southwell Naftzger
- Brett Neff Memorial
- Ross Foundation, strings
- Phyllis Shattuck, vocal
- Jackie Smith Southard Endowment

**General**
- Augusta Christian Church
- Boyer Education
- Karol and Earl Callison
- Charitable Foundation, Inc.
- Gilbert U. Combs Memorial
- Glen W. Dickinson
- Farmers Insurance Group of Companies
- Aid to Education Program

**Health Professions**
- Helen Halstead, nursing
- Mary Klocke, nursing
- Lies and Moxley, dental hygiene
- The Skillbuilders Fund

**Liberal Arts and Sciences**
- Air Products and Chemicals Company
- BG Products
- Elf Atochem Science Olympiad
- Fletcher-Mckinley, chemistry
- Victor Murdock, journalism
- Pueblo Summer Program
- Joseph K. Stafford Memorial
- Symbios Logic, computer science
- Vulcan Chemical Science Olympiad
- Norma Wingert Memorial, philosophy

**Other**
- International Student Union
- Metropolitan Life, handicapped
- Trio Program

**Student Affairs**

The Vice President for Student Affairs and Dean of Students is responsible for the coordination and supervision of the Division of Student Affairs. Issues involving enrollment services, campus life, development programs, problems, and activities on the Wichita State University campus are addressed by the staff of the division. This office is also responsible for student health, the counseling center, and the University’s residence halls.

The Office of Enrollment Services, which includes undergraduate admissions, student financial planning and assistance, community college cooperation, international admissions, and the Intensive English Language Center, is responsible for activities related to the admission and enrollment process.

The Office of Campus Life, 105 Grace Wilkie Hall, is responsible for services for people with disabilities, fraternities and sororities, student organizations and student involvement programs, the child development center, women’s resource center, international programs, career services, campus recreation, volunteer opportunities, informed sources, and encouraging scholastic achievement.
shared mission of these many offices and programs is to enhance the quality of campus life at WSU.

The dean of University College is responsible for the programs and policies of University College. (See the University College section of the Catalog.)

An assistant vice president is responsible for Operation Success, Project Discovery, Upward Bound, the Ronald E. McNair Postbaccalaureate Achievement Program, and Upward Bound Regional Math-Science, the federal TRIO programs for students. (See the Special Programs section of the Catalog for a more complete description of these programs.)

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

Individual career counseling is available to assist students and alumni/alumnae with planning and decision making. Assessment instruments, including the Strong Interest Inventory, 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, employer directories, information on employment trends, employer recruiting literature, annual salary survey reports and information on graduate and professional school opportunities are available in the Career Resource Center (CRC).

The CRC also houses a lab which provides computers for students to prepare job search documents such as resumes and cover letters. 1stPlace, a computerized resume referral service, is available to all students who register with Career Services.

Degree candidate and alumni/alumnae job search services include resume referrals to career employment vacancies; on-campus interviews with employer representatives; and an employment listing bulletin.

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

Community and Multicultural Programs
The Office of Community and Multicultural Programs, a new unit in the Division of Student Affairs, is located in 105 Grace Wilkie Hall and may be reached at (316) 978-3078. The mission of the office is two-fold: to assist in fostering an environment which builds community while promoting cultural diversity and to provide leadership, involvement, and volunteerism opportunities to individual students and student organizations through a combination of services and programs, listed below.

Services
Multi-Cultural Resource Center
Student Organization Support / Handbook
Greek Affairs
Student Organization Registration
Volunteerism
Women's Resource and Referral Services

Programs
American Awareness, and Native American Awareness
National Hispanic Heritage Month, Black History Month, Women's History Month, Asian-Pacific
Building Up Dreams in Urban Youth (BUDUY)
BreakAway—Alternative Spring Break
"Into the Streets" Program
Community Service Fairs
Fall/Spring Leadership Institutes
Student Organization Presidents' and Advisor's Appreciation Breakfast
Greek Convocation

Counseling and Testing Center
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 areas 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.

Disability Services
The Office of Disability Services provides supportive services for students who experience physical or mental disabilities. Students qualified for this service can receive a handbook of services by contacting the office:

Office of Disability Services
Wichita State University
1845 Fairmount
Wichita, Kansas 67260-0132
(316) 978-3309

Services are designed on an individual basis and may include the following: note taking, assistance to class, library assistance, test proctors, assistance typing papers, and braille notes. Some auxiliary aids are available for students to use. Textbooks also can be recorded on tape when requested.

Disability Services encourages students to be as independent as possible on campus and to use those services which help maximize learning.

Housing
On-campus housing is available for more than 1,000 students in Fairmount Towers, Brennan Hall, and Wheatshocker Apartments. Housing options include an honors hall, a fine arts floor, smoke-free floors, coed floors, suite-style residence hall rooms, and a variety of apartment units.

Because research nationwide has repeatedly shown that freshmen who live on campus are more successful academically than freshmen who do not live on campus, and because Wichita State University is committed to students and student success, WSU requires all incoming freshmen to live on campus in designated University housing. Freshmen live their first two semesters in our traditional residence hall, Fairmount Towers, unless they qualify to live in the Honors Hall in Brennan or are exempted from living on campus. All other students may choose their own accommodations; however, University housing is highly recommended.

Exemptions to the freshmen residency requirement are made for freshmen who are:
1. 21 years old or older
2. Married
3. Living with a parent, legal guardian, grandparent, uncle, or aunt in Sedgwick County
4. Living in official Greek housing
All freshmen who would like to be exempted from the residency requirement—including those who fall into one of the above categories—are required to complete and submit a Freshman Exemption Form. Exemptions will be reviewed by Housing and Residence Life and a written reply will be sent to those who requested an exemption.

Admission to Wichita State does not mean automatic room reservation. Each
student admitted will receive information concerning housing from the Office of Admissions. Students need to complete a contract and an application card and pay an application fee and prepayment/deposit to reserve a room or apartment. Students are encouraged to apply early since space is limited.

For more information, contact Housing and Residence Life
Wichita State University
1845 Fairmount
Wichita, Kansas 67260-0141
(316) 978-3693

Wichita State University reserves the right to make policy adjustments where the situation demands and to change the residence of any student or deny or cancel residence accommodations of any student in cases where such action is deemed desirable.

Office of International Programs
International Programs, 303 Grace Wilkie Hall, serves the special needs of approximately 1,400 international students from more than 90 countries enrolled at Wichita State. (For international student admission requirements, see the Admission to Wichita State section of the Catalog.) An orientation program specially designed for new international students prepares them for entrance into the American academic systems and way of life.

International Programs also sponsors the Friendship Family Program, the Global Education Program, and other activities that promote interaction between American and international students.

In addition, the International Program houses a Study Abroad Center which provides information to American students on study, work, and travel opportunities abroad. Information concerning Fulbright-Hays grants may be obtained from this center.

Student Health Services and Student Health Insurance
Student Health Services, located in 209 Iahberg Hall, is the on-campus health care facility for students. Ambulatory health care is provided for students with health concerns, medical problems, illnesses, and injuries. Health services and health education are provided by a staff of professional nurses and physicians from the local community. The services of registered nurses and nurse practitioners are available during office hours and physicians may be seen by appointment during their scheduled clinic hours. Physicians specializing in dermatology, gynecology, internal medicine, ear, nose, and throat, and family practice are available.

Special services of adult/travel immunizations, confidential HIV testing, tuberculin skin testing, family planning information and services, physical examinations required by academic programs, nutrition and diet counseling, and health screening are offered.

A group plan for accident and sickness insurance coverage for students and dependents is available. Opportunities to enroll in the program are offered at the beginning of each regular semester. Information is available at Student Health Services and the Office of Campus Life.

Student Health Services welcomes all students regardless of insurance coverage or no insurance coverage. The goal is to provide students with appropriate health care to enable them to function at their optimum level of wellness.

Student Involvement Programs
The Office of Student Involvement Programs, located in Room 105, Grace Wilkie Hall, 978-3022, exists to serve the needs of WSU’s student organizations and individual students in the areas of leadership and involvement. The mission of the office is to encourage WSU students to become involved in campus life and community service and to provide WSU students with the skills and training necessary to become effective leaders. A combination of programs, services, and consultation are offered to accomplish this mission. Services and programs currently offered include a leadership library, student involvement resource brochures, sponsorship of recognition programs (i.e., Student Organization Presidents Reception, Advisors Appreciation Breakfast), workshops and conferences on topics related to leadership and student involvement and a leadership speakers bureau, a student organization handbook, and an ongoing community service program. Additionally, personnel are available to provide specialized training and consultation to students and student organizations upon request. Many of these programs and services are delivered through the Leadership Council, which is made up of student volunteers with an interest in leadership and a commitment to helping their peers.

All students are encouraged to use the services and programs offered through this office where they can find “what they need to succeed.”

Office of Undergraduate Studies and Student Services
The University is interested in helping WSU students meet their educational career goals. The Office of Undergraduate Studies and Student Services is a resource to students who are in academic difficulty or who are contemplating leaving the University. Students who do not know how to negotiate the University system are encouraged to call or visit this office. The office maintains an inventory of campus programs and services available to help students succeed while at the University. For assistance, contact:
Office of Undergraduate Studies and Student Services
105 Grace Wilkie Hall
Phone: (316) 978-3295
E-mail: wusline@twsuvm.ucwtsu.edu

WSU 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, and staff, and community. A diverse staff of degree teachers and student assistants facilitate developmentally appropriate activities—art, language, music, science, and literature—in an international environment. The child care center is open Monday through Friday from 7 a.m. to 6 p.m. (excluding University holidays) for children six weeks through six years old. Full- and part-time care is available in addition to drop-in care on a space available basis. Child care scholarships are available for WSU student parents who demonstrate financial need.

For more information, call (316) 978-3109.

Special Programs
Center for Economic Development and Business Research
The Center for Economic Development and Business Research, a service of the W. Frank Barton School of Business, engages in business and economic research for a wide variety of clients in both private and public sectors. The center collects, analyzes, and disseminates information to support activities of government, education, business, and economic development organizations. The center maintains a comprehensive database of economic indicators including population, personal income, employment, construction, and census data.
Activities focus on issues related to the economic health of the region. The center publishes the *Kansas Economic Report* and a supplemental monthly, *Kansas Economic Indicators*.

**Center for Entrepreneurship**

Housed in Devlin Hall, the Center for Entrepreneurship is part of the W. Frank Barton School of Business. It encourages entrepreneurial thinking and activities through quality education, research, and community involvement to better serve its customers and stakeholders. The center provides a comprehensive curriculum in entrepreneurial studies at both the undergraduate and graduate level.

Consistently recognized as one of the top ten schools for entrepreneurship, the center offers a Bachelor of Business Administration in Entrepreneurship through the Barton School’s Department of Marketing and Entrepreneurship. The entrepreneurship major offers students challenging and exciting courses emphasizing the formal study of entrepreneurship. The degree program requires completion of the University’s general education courses and business core courses as well as courses specifically required for the entrepreneurship major. The business core courses include meaningful exposure to accounting, finance, economics, management, and marketing. The major also requires the student to research and write an involved business plan and to understand risk analysis, problem solving, and how to develop a business strategy for a new or growing venture. In addition, graduate students may select entrepreneurship courses in both the MBA and Master of Science in Business degree programs. Scholarships are available for both undergraduate and graduate study.

Additional programming includes workshops/seminars, a visiting lecture series, co-sponsorship of the Metro Awards, a high school conference, the Kansas Family Business Forum, and two student organizations, the Association of Collegiate Entrepreneurs (ACE) and Students in Free Enterprise (SIFE).

**Center for Management Development**

The Center for Management Development (CMD), through the Barton School of Business, offers noncredit management development seminars to Wichita and the surrounding area.

The CMD seminars and workshops have been acclaimed for their usefulness to practicing business people and other professionals in a wide variety of organizations. The center offers a broad range of management education and development opportunities to the growth-oriented supervisor, manager, or professional specialist in business, industry, government, and other public or private organizations.

**Center for Women’s Studies**

The Center for Women’s Studies coordinates scholarly and curricular activities related to the study of gender and culture. Although within Fairmount College of Liberal Arts and Sciences, the center participates in course offerings, research projects, and other educational activities with many other academic units both within and beyond Fairmount College. The center is responsible for administering the BA in women’s studies, as well as the minor, and supervises the work of students pursuing a concentration in women’s studies in various undergraduate and graduate areas. In addition, the center serves as an informational resource for University students and faculty, as well as for the greater Wichita community.

**Cooperative Education Program**

The Cooperative Education Program is an academic program that expands learning experiences through paid employment in a supervised educational work setting related to the student’s major field of study or career focus. More information is available in the Special Academic Areas section of the Catalog.

**French Student Exchange Program**

WSU is among the 100 colleges and universities in the United States that participate in the annual student exchange organized by the French Ministry of Education. One individual from WSU spends the academic year in France as a salaried assistant in English, and a student from France is attached to the WSU Department of Modern and Classical Languages and Literatures as a salaried assistant in French. Majors and minors in French who have graduated within one year prior to departure date are eligible to apply.

**National Institute for Aviation Research**

Aviation research at the University dates from 1928, when aeronautical engineering students and Professor Alexander Petroff constructed the first wind tunnel, spurred by a $1,000 donation by Clyde Cessna. In 1951, the Walter Beech Memorial Wind Tunnel, financed in part by a $100,000 grant from Mrs. Olive Ann Beech, was dedicated. The National Institute for Aviation Research (NIAR) was organized at WSU in 1985, and has become a valuable resource to the worldwide aviation industry, which is so important to the Kansas economy. Current NIAR facilities encompass more than 74,000 square feet, and the 15 laboratories and associated equipment are valued at more than $20 million. The mission of NIAR—To conduct research, transfer technology, and enhance education for the purpose of advancing the nation’s aviation industries—reflects continuation of historic emphasis on linking research, technology application, and education.

The institute serves the needs of industry and government and supports educational programs of the University, providing a site and facilities for both faculty and student research in support of the College of Engineering and Fairmount College of Liberal Arts and Sciences. As a Kansas Technology Enterprise Corporation (KTEC) designated Center of Excellence, NIAR emphasizes the progress of new technologies from laboratory to commercial application. The institute is organized into 15 laboratories operating a variety of programs to fulfill its mission. Virtually every new airplane designed within the past decade by Wichita-based aircraft manufacturers has research roots which emanate from NIAR laboratories.

The Aerodynamic Laboratories have research capabilities for basic aerodynamics, confirmation testing of current and advanced designs, flow visualization, and development of advanced deicing methods. The most famous wind tunnel, the Walter H. Beech Memorial Wind Tunnel, is capable of speeds up to 160 mph through a 7 x 10 foot test section and features state-of-the-art instrumentation and data processing capabilities. Besides traditional airplane studies, nontraditional research such as testing of buildings, trucks, an Olympic hopeful bicyclist, and futuristic large wind turbines for electric power generation have been conducted in this facility. In addition, a 2 x 3-foot flow visualization water tunnel, a 3 x 4-foot low-speed tunnel, and Mach 2 and Mach 4 supersonic tunnels are available.

The Computational Fluid Dynamics and Acoustics Laboratory provides computational expertise and software and hardware to solve complex fluid dynamics flow and aerodynamic noise problems and complements experimental research.

The Crash Dynamics Laboratory, with a 75-foot long crash sled capable of 52-g
peak load testing, conducts aircraft seat certification testing to FAA standards. The entire crash impact occurs in one-quarter second, during which time thousands of measurements are recorded and analyzed.

The Composites and Advanced Materials and Structures Laboratories have received national recognition for expertise in determining the structural properties of new lightweight composite materials through the NASA-Industry AGATE general aviation program. This laboratory features a large, high-pressure, high-temperature autoclave, ovens, pultrusion, braiding, filament winding and resin-transfer-molding capabilities, as well as extensive monitoring and measurement instruments.

The Structures Laboratory is well equipped to conduct mechanical properties testing, including environmental effects on new composite materials. Projects include aircraft and bicycle components, engine inlets, and the Aladdin, a complete quarter-scale research airplane designed by a statewide student team which won a NASA General Aviation Award.

The Airframe Design and Analysis Laboratory works with computer models of aircraft structures, aircraft seats, and biomechanical data (simulations of the human body) to improve seat and restraint (safety belt) systems.

The Center for Technology Application (CTA) provides support for manufacturers in the application of technologies to reduce costs and maintain world-class competitiveness. Training in computer-aided design (CAD), and Quality, including ISO 9000 are provided. The CAD/CAM (Computer Aided Design/ComputerAssisted Manufacturing) group conducts training workshops in both CADAM and CATIA software. CTA also operates the Wichita Field Office of the Mid-American Manufacturing Technology Center (MAMTC), a state and federally supported technology transfer program which helps small and medium size manufacturers become and remain competitive.

Other units of NIAR include Avionics, Cryogenics and Superconductivity, Human Factors, Icing, Information Systems, Mechatronics and Systems Integration, Metrology, Propulsion, and Research Machine Shop.

Student Support. All NIAR laboratories are utilized for academic instruction for undergraduate and graduate students in addition to being used for government and industry research projects. Student research assistants gain valuable real-world research and development experience to complement their academic classroom studies, and receive pay to assist in meeting the expenses of education. More than 60 undergraduate student assistants and 50 graduate research assistants are supported annually. Many graduate students utilize NIAR laboratories and equipment to conduct their thesis and dissertation research.

Student Awards. Undergraduate students have received national awards for their participation in NASA’s General Aviation Airplane Design Competition. A statewide team of students from Kansas won first place in 1995, second place in 1996, and first place in 1997. A quarterscale of the 1997 winning design is currently being fabricated by students in the Composites Laboratory. Many student projects from the NIAR wind tunnels have received awards at regional American Institute for Aeronautics and Astronautics (AIAA) competitions.

Cooperative Research Relationships. NIAR has many cooperative relationships. It is one of five Kansas Technology Enterprise Corporations (KTEC) university-based Centers of Excellence. NIAR is a member of the FAA Center of Excellence for Airworthiness Assurance in partnership with six other major universities. NIAR has a key role in NASA's Advanced General Aviation Transport Experiment (AGATE), a multi-year program in partnership with companies which design and build single-engine and business jet airplanes. The Aircraft Design and Manufacturing Research Center (ADMC) was formed in partnership with Kansas aviation companies, KTEC, Kansas State University, the University of Kansas, and Pittsburg State University. A new Manufacturing Innovation and Development (MIND) partnership was created recently to speed innovation in manufacturing processes. NIAR is a member of the Kansas Industry-University-Government Engineering Education Consortium. Though these affiliations, the institute has gained a national reputation for leadership in research partnerships that include industry and state and federal participation.

Student Support Services, Project Discovery, McNair Scholars Program, Upward Bound/Wichita Prep, Upward Bound/Galaxy Experience

Student Support Services, Project Discovery, McNair Scholars Program, and Upward Bound’s Wichita Prep and Regional Math-Science Center/The Galaxy Experience are special programs designed to help students prepare for University life and successfully complete their courses of study.

Student Support Services, a federally funded program, provides limited income and first generation college students with a multiplicity of academic support services which assist students to persist and graduate from WSU. The program has three components which provide comprehensive, one-on-one tutorial assistance and an interconnected series of support services: academic and personal counseling, financial aid assistance, career guidance, assistance in the development of study skills, a text book usage program and free access to computers and typewriters. The program serves 750 students each year and has been in operation at WSU since 1970.

Project Discovery, a federally funded Talent Search Program, was established at Wichita State University in July 1977. The project assists approximately 1,500 limited-income individuals in gaining admission to postsecondary institutions throughout the nation and preparing for secondary school. The program provides assistance to middle school students, high school students, and dropouts from secondary and postsecondary schools. Specific help is provided with admission forms, financial forms, and registration for ACT/SAT assessment examinations. Tutorial assistance and instruction to middle school students also is provided. The project’s two offices at Wichita State and Labette County Community College serve middle (WSU) only and high schools and community agencies in Wichita and nine counties in southeast Kansas.

The Ronald E. McNair Postbaccalaureate Achievement Program encourages qualified college juniors and seniors to pursue graduate studies. Named in honor of Challenger space shuttle crew member Ronald E. McNair, the program provides services which prepare students for postbaccalaureate study, including assistance in locating financial aid, preparation for the Graduate Record Examination (GRE), and opportunities to attend and present papers at national conferences and to write for scholarly publications. Scholars participate in research conducted by University faculty, and local and national symposiums provide an opportunity for students to present their research. In addition, regular workshops encourage students’ serious consideration of doctoral study.
The Upward Bound programs are federally funded programs that have been at WSU since 1966 (Wichita Prep) and 1991 (The Galaxy Experience). Wichita Prep assists high school students from limited-income backgrounds and who are first-generation university students with academic potential but who may have inadequate secondary school preparation. The Wichita-area high school students participate in an intensive six- to eight-week summer and nine-month academic year schedule to improve academic and social skills. Services include tutorial assistance; academic, career, and personal counseling; postsecondary admission; and academic classes and workshops. The program serves 55 students each year. The six-week residential program for students returning to high school assists them in the completion of secondary requirements and gives them exposure to college life. An eight-week residential program for students who will enroll in university classes in the fall provides them their first experience with college course work.

The mission of the Upward Bound Regional Math-Science Center/The Galaxy Experience is to stimulate and advance interest in mathematics, science, and computer technology; challenge students to perform; provide a unique residential, academic, exploratory, hands-on experience; and encourage high school students to realistically consider attaining a postsecondary degree in mathematics or the sciences. The program offers high school students from limited-income backgrounds and first generation university students the opportunity to interact with a highly qualified staff and faculty, as well as industry and peer mentors. Fifty participants are drawn from public and private high schools in a four-state area—Kansas, Missouri, Nebraska, and Iowa. Ten of the 50 participants spend a week in the Future Astronaut Space Camp in Hutchinson, Kansas. The program focuses on four themes important in the discipline of science:

Space Science—emphasizes how and why this country puts both human being and machine into outer space.

Aerodynamics—investigates the wonders of flight within earth’s atmosphere.

Environmental Concerns—examines conservation and pollution issues in the nation and in immediate surroundings.

Human Health Issues—focuses interests in biological science on issues most pertinent to students.

Research Administration

The Office of Research Administration assists the faculty in developing research, training, and service proposals for external funding. The office collects, maintains, and provides information regarding the programs, interests, and needs of government agencies, private foundations, and businesses; facilitates communication between the faculty and prospective sponsors; coordinates the preparation and submission of project proposals; provides general administration support for grants and contracts received; and monitors compliance with federal, state, Regents', and University regulations and policies.

Small Business Development Center

The Small Business Development Center (SBDC) was established in October 1983. The SBDC provides free one-on-one management assistance, resource referrals and business information, and low-cost training to small business owners, including potential business owners and inventors. The WSU SBDC serves 13 counties of south-central Kansas.

University Press of Kansas

The University Press is operated jointly by six state Kansas universities: the University of Kansas, Kansas State University, Wichita State University, Emporia State University, Fort Hays State University, and Pittsburg State University. Founded July 1, 1967, it was the first university press in the United States to function on a statewide level under specific sponsorship of all of the state’s universities. Offices are located on the campus of the University of Kansas in Room 303, Carruth-O’Leary Hall.

Hugo Wall School of Urban and Public Affairs

The Hugo Wall School of Urban and Public Affairs was created in 1993 to enhance the urban mission of Wichita State University as articulated by the Board of Regents.

The school conducts instruction, research, and service programs, integrating these three essential University functions in responding to the needs of students and the urban environment. Academic programs in criminal justice, gerontology, minority studies, public administration, and social work make up the academic core of the Hugo Wall School. The school’s service programs include seminars for area city and county managers, professional development for area public managerial personnel, certification training for the city clerks and municipal finance officers of Kansas, and municipal leadership workshops for local elected officials.

The school’s research and community service programs include the Kansas Public Finance Center, Midwest Criminal Justice Institute, Kansas and Nebraska Regional Community Policing Training Institute, and the Institute for Communities and Government.

Kansas Public Finance Center

The mission of the Kansas Public Finance Center is to develop and help implement public strategies that will promote economic vitality in Kansas and to advance the study of applied public scholarly research on the theory and practice of public finance, including public budgeting, financial management, and economic development; to strengthen the ability of WSU faculty to provide specific advice to public and private policy-makers about economic vitality and public finance; and to develop and disseminate financial analysis methodologies and techniques appropriate for the public sector based, in part, on private sector practices.

Midwest Criminal Justice Institute

The Midwest Criminal Justice Institute (MCJI) was created in the Hugo Wall School in 1997 to provide specialized education and training to regional criminal justice professionals. Eight-hour seminars are offered monthly by nationally renowned instructors who teach on substantive topics such as crime prevention through environmental design, geographic criminal profiling, restorative justice, and other contemporary criminal justice innovations. In addition to a substantive focus, the MCJI features day-long interactive seminars for criminal justice executives, and a two-week executive leadership seminar each summer. WSU students are permitted to apply MCJI seminar attendance toward elective criminal justice college credit although additional fees (and some restrictions) are required.

Regional Community Policing Training Institute

The Kansas and Nebraska Regional Community Policing Training Institute was created under a cooperative agreement between the Office of Community Oriented Policing Services, U.S. Department of Justice, and WSU. This twelve-month renewable project provides community
policing training, technical assistance, and access to updated research and policy information to policy agencies in Kansas and Nebraska. While the primary focus is on rural agencies, resources and services are available to all agencies within the region. Project partners are the Wichita Police Department, Kansas Association of Chiefs of Police, and Wichita Crime Commission.

Institute for Communities and Government
The Institute for Communities and Government performs research and policy analysis for government and community institutions. The institute faculty and professional staff also develop, manage, and teach workshops and short courses for certification of professionals, continuing education, and development of leadership and governance skills. Educational and analytical activities at the institute promote excellence in government and community improvement. To the extent possible, the institute develops parallel products for academic, professional, and community application.

WSU Center for Energy Studies
The WSU Center for Energy Studies conducts energy-related research with emphasis on applications within the state of Kansas. Currently, the major focus of the research conducted in the center is related to various aspects of electric power and energy. However, research related to alternate and fossil energy sources is also within the scope of the center’s activities. The industry-supported Power Electronics and Power Quality Research Laboratory is also a part of the Center for Energy Studies. The center is housed in the WSU Department of Electrical Engineering.

Special Facilities
Instructional facilities on the 330-acre Wichita State campus are used for educational purposes more hours per day than at any other Kansas college or university. Many of the University’s special facilities are described on the following pages.

Abrah Library
Through a wide range of materials, facilities, and services, the University Libraries support teaching and research at WSU. The growing collections of more than three million items include books and periodicals, microforms, government publications, corporate annual reports, scores, videotapes, audio recordings, and CD-ROMS. In 1991, Abrah Library became an official United States Patent and Trademark Depository Library, the only such depository in Kansas.

Library facilities include an open stack arrangement, seating for more than 800 people, group and faculty study carrels, electronic carrels containing listening and viewing equipment, microform reading and printing equipment, and photocopiing, and typewriters. Additionally, computer terminals and printers are provided to access the library’s online catalog and electronic databases.

The University’s libraries offer a variety of services, including convenient hours as well as dial-in access to the online catalog and a number of the library’s periodical indexes. Reference librarians are available to help students and faculty locate information and use the computerized systems. These librarians also perform literature searches in numerous remote computerized databases. When materials are not owned, interlibrary loan services will locate and borrow materials 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. This collection includes papers of the abolitionist William Lloyd Garrison, the Kantor Collection of the Civil War Sanitary Commission, and local history collections.

Cable Television
Wichita State University operates WSU-13 Television on Wichita’s cable television system and WINDOWS on suburban cable systems. Both programs feature adult-oriented educational, cultural, and informational programming. This programming includes 18 to 22 television courses per semester offered for academic credit by the various colleges at WSU. WSU-13 Television and WINDOWS also produce programs featuring distinguished guest speakers, fine arts performances, and other campus events. WSU-13 Television is affiliated with The Discovery Channel and BizNet, nationally delivered program services. In addition to full-time staff, 15 students are involved in the operation of the channel and the production of programs. Facilities are located in the Media Resources Center.

Computing Center
The University Computing and Telecommunications Center serves the students, faculty, and staff of the University by providing contemporary computing and telecommunications facilities for instruction, laboratory research, sponsored programs, administrative data processing, and public service. These services include systems analysis and design, custom programming, interactive time-sharing, modem pooling, networking, access to a national and international (Internet) network, batch and remote printing, computer operations, and on-line administrative data bases. End-user assistance is available for both microcomputer and mainframe computing.

Jabara Hall, the science laboratory and classroom building, provides state-of-the-art facilities for computing at Wichita State and allows greater computer access to students as well as faculty.

The central computing facility, located in the north portion of the new building, occupies three floors, two of which are accessible to the public. The first floor houses the open lab (for both mainframe and microcomputing), the print room, dispatch window, user services, and the Academic Support areas. The hours for the computer labs are Monday-Thursday from 7 a.m.-midnight, Friday from 7 a.m. to 6 p.m., Saturday from 10 a.m.-8 p.m., and Sunday from 1-8 p.m. The second floor contains the administrative offices, microcomputer repair and microcomputer networking and software offices, as well as a faculty and staff microcomputer classroom. The third floor is devoted entirely to housing the actual computer systems and technical support offices.

The computing facilities support an IBM ES9121 Model 440 mainframe computer, and a DEC VAX/4000 Model 500. The IBM mainframe has 512 million characters of main memory and more than 180 billion bytes of auxiliary disk storage. The VAX equipment provides 23 Vups of computing power, with 192 million characters of main memory, 20 GB of disk storage and a 7 cartridge tape magazine with 18 GB capacity.

The campus network supports Ethernet, SNA, and asynchronous communications with more than 4,000 microcomputers and 100 CRT terminals providing interactive computing for campus classrooms, laboratories, and offices. The terminals are available for use with the academic time-sharing systems VM/CMS and DEC/VMS and the administrative terminal system (CICS). Students can access the computing resources by using any of the campus computing labs located throughout the campus (as well as the ones located on the first floor of the com-
puting center complex) designated for student use. Students also may access the campus network by using a telephone modem and dialing the campus network. Instructions and software for accessing the computing resources are available for a nominal fee in the campus bookstore. Information papers describing the facilities and the software supported by central computing are available in Room 120.

Harvey D. 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.

Hesekett Center
The Hesekett Center, a multipurpose dance, physical education, and recreation complex, is named after H. Dene Hesekett, a 1935 alumnus and benefactor of WSU. The 166,000 square foot complex contains instructional, research, and recreational areas as well as the equipment necessary to support activities.

Activity areas consist of a weight room, combatives room, 25-meter indoor swimming pool with separate diving well, eight handball-racquetball courts, and a 200-meter indoor jogging track which surrounds five basketball courts. The outdoor area contains a six-court lighted tennis complex and four large lighted play fields.

These activity areas are designed to facilitate an extensive campus recreation program.

KMUW Radio Station
KMUW Radio broadcasts at 89.1 FM. The 100,000-watt station is one of nearly 600 member stations of the National Public Radio (NPR) network. KMUW is also affiliated with Public Radio International (PRI) and Kansas Public Radio (KPR). KMUW's mission is to provide high quality cultural and informational broadcast services to the greater Wichita area as well as the university's urban mission of community service. KMUW also provides training and professional experience for WSU students.

Learning Resource Center
Wichita State offers a variety of services to students through the programs of the Learning Resource Center (LRC). Courses are offered to help students improve their reading comprehension and speed, critical thinking skills, vocabulary, library skills, study strategies, and standardized test-taking skills. Complete descriptions of courses offered at the center are included in the University College section of the Undergraduate Catalog.

In addition to formal course work, the Learning Resource Center offers free workshops and media programs to WSU students, including study skill workshops; videotapes for study skills and algebra review; and computer preparation programs for the Graduate Record Exam and the Pre-Professional Skills Tests. The LRC may be contacted for information about other no-cost programs offered for special student populations, such as on-call study skills advisors, vocabulary preparation workshops, and conversation groups for students who need to increase their English speaking skills.

Marcus Center for Continuing Education
Many educational services are offered at the Marcus Center for Continuing Education, an adult education facility at 4201 East 21st Street. Specialized courses for business and industry, governmental agencies and the professions; special conferences for the general public; and a wide variety of personal enrichment programs are offered in the center. The center also is available as a rental facility.

Media Resources Center
The Media Resources Center (MRC) is a comprehensive media and video communications organization serving the instructional, research, and service aspects of Wichita State. The center is housed in a 20,000 square foot, state-of-the-art facility, and operates WSU-13 Television, the University's cable television station.

Facilities and resources include an interactive television (ITV) classroom, instructional design consulting and production, a multimedia lab, complete photographic darkroom laboratories, a computerized graphic design studio, a professional television production studio, satellite conference downlinks, compressed video and desktop videoconferencing facilities, and the campus cable TV network.

The MRC will design and install technology in 25 minimally equipped media classrooms and three fully equipped master classrooms by Fall 1998. More master classrooms will follow.

A wide array of media equipment systems is available for classroom use by students and faculty. These include video recording systems and projection equipment. A collection of 1,000 videotapes is available as well.

Institute for Rehabilitation Research and Service
The Institute for Rehabilitation Research and Service (IRRS) was established in 1995 to promote a spirit of interdisciplinary cooperation among WSU faculty with rehabilitation-oriented interests. It is committed to improve the quality of life of persons with disabilities through basic and applied research, and service delivery program enhancement in concert with Wichita rehabilitation agencies.

The IRRS, in cooperation with the Cerebral Palsy Research Foundation of Kansas (CPR), manages the Rehabilitation Engineering Research Center (RERC). In existence for more than 20 years, the RERC utilizes state and federal funds to improve the educational and vocational opportunities for persons with disabilities. The RERC has at its disposal significant faculty expertise and facilities to carry out its mission.

Rhatigan Student Center
The Rhatigan Student Center (RSC), formerly called the Campus Activities Center (CAC), is the community center for Wichita State University. Through its facilities and services, the student union serves students, faculty, staff, alumni, and guests of the University.

The RSC has several dining areas to provide a variety of atmospheres and menus as well as a catering department to meet special 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, Hallmark cards, Shocker souvenirs, and gifts. For leisure use, the Recreation Center on the lower level includes pinball, video games, bowling, billiards, snakes, locker rental, disc jukebox, and an engraving shop, laminating services, and a barber/beauty shop. The Recreation Center also is the home of the nationally ranked WSU varsity bowling teams. Additionally, the RSC has a theater and a variety of rooms that can be scheduled for meetings, special events, and conferences.

The RSC 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
Seven satellite television antennas are located to the southeast of the Sheldon Coleman Tennis Complex using bubble sheets for data collection in their research projects.

SPTE. The lab organizes, administers, and scores the Student Perception of Teaching Effectiveness. The instructor is provided a profile of students’ perceptions of their teaching skills. Upon request, consultation is offered regarding the profile analysis.

Terminals. The terminals are available for both student and faculty use.

TWSU BBS. This computer bulletin board is for WSU faculty, staff, students, and anyone else interested in bulletin boards. The purpose of TWSU BBS, among other things, is to (a) provide information about WSU, including schedules, the University Calendar, special events, and other information; (b) direct people to individuals who can answer questions about WSU; (c) provide shareware and public domain software; and (d) provide a wide variety of network conferences and other e-mail services.

Speech-Language-Hearing Clinic
Wichita State University Speech-Language-Hearing Clinic, 104 Hubbard Hall, provides diagnosis and treatment of speech, language, and hearing problems, including hearing aid fittings. Services are available on a fee-for-service basis to people in Wichita and the surrounding communities and to University students, staff, and faculty. The clinic is open 8 a.m.-5 p.m. Monday through Friday for scheduled appointments (978-3289 before July 1, 1996; 978-3289 after July 1, 1996). Upper division students, graduate students, clinical staff, and faculty in the Department of Communicative Disorders and Sciences provide services. All work is provided or supervised by departmental staff and faculty who hold appropriate licensure and certification.

Sports and Recreation
Sports and recreation facilities for students at Wichita State include a regulation 18-hole golf course; the 10,656-seat Henry Levitt Arena which is used for intercollegiate basketball games, volleyball matches, and major entertainment events; Cessna Stadium; the 5,665 seat Eck Stadium-Tyler Field, home to the Shockers baseball program, which ranks among the finest college baseball facilities in the country; the Sheldon Coleman Tennis Complex with eight lighted courts, home to WSU’s men’s and women’s intercollegiate tennis program; and the new C. Howard Wilkins Softball Complex for intercollegiate softball for women.

Wichita State is a member of the Missouri Valley Conference and consistently ranks nationally in baseball and bowling.

The campus recreation program—featuring the multipurpose complex, the Heskett Center—is designed to provide activities for all students, faculty, and staff. In addition to intramurals and open recreation time, offerings include sport clubs; special events; programs and excursions for children of WSU students, faculty, and staff; a family program; mini-classes and workshops; outdoor recreation, and aquatics.

Edwin A. Ulrich Museum of Art
The Edwin A. Ulrich Museum of Art is recognized among university museums for its outdoor sculpture collection and for the quality of its exhibition program. In addition to galleries which hold exhibitions from the museum’s collection, the museum hosts seven special exhibitions a year, each of which runs for approximately six weeks. Call (316) 978-3664 for information on current exhibitions.

The museum opened in 1974 and over the years has developed an active exhibition program. As a visual laboratory for the students of the University as well as the community, the exhibition program presents a blend of traditional artwork, often from the museum collection, with more experimental work. Exhibitions have featured artists such as David Hockney, Romare Bearden, Morris Louis, Isabel Bishop, David Salle, Sandy Skoglund, Jesus Moroles, Faith Ringgold, and Elizabeth Murray, along with collections of electronic and neon artists and Kansas native artists. In cooperation with the faculty of the College of Fine Arts the museum is the setting for concerts, lectures, and demonstrations by visiting artists as well as WSU faculty.

The art collection, owned by Wichita State University Endowment Association and managed by the professional staff of the museum, now numbers more than
Student Organization Registration

Student organizations may be granted the privileges of University recognition if they are registered with Office of Community and Multicultural Programs and approved by the Student Government Association. To be approved, each organization must provide a completed WSU Student Organization form, lists of officers with addresses, copies of constitutions and bylaws, and advisor’s name and address to the Office of Community and Multicultural Programs. Once an organization has provided all necessary information, it may be granted official recognition by the SGA. After receiving official recognition, an organization may use Wichita State in its name, use University rooms or grounds for meetings, post announcements on University bulletin boards, and be listed as a WSU organization in the Catalog, Campus Directory, and other University publications. Records of recognized organizations will be maintained on the Organization Database in the Office of Community and Multicultural Programs, so that their representatives may be invited to participate in leadership development programs provided by the University. The organization may request funds from student fees in accordance with established procedures and guidelines of SGA statutes.

For more information regarding Student Organization Registration, contact the Office of Community and Multicultural Programs, 105 Grace Wilkie Hall, Campus Box 8, (316) 978-3022. Wichita Radio Reading Service

Operating on a subcarrier frequency of KMUW, the Wichita Radio Reading Service (WRRS) programs readings of printed material to more than 2,000 print-disabled individuals. More than 100 volunteers supply the readings, with additional programming from the In-Touch Network, National Public Radio, and Public Radio International.

Wiedemann Hall

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

The building is named for the late community philanthropist and music lover Gladys H.G. Wiedemann who in 1983, as president of the K.T. Wiedemann Foundation, Inc., donated the great Marcussen organ.

Bloomfield Foyer, a gift of the Sam and Rie Bloomfield Foundation, Inc., graces the entrance to Wiedemann Hall.

8,000 objects. Nineteenth and 20th century European and American art, paintings, drawings, sculpture, and prints form the core of the collection. The museum organizes traveling exhibitions of art from the collection. Solo exhibitions by Frederick Waugh, Gordon Parks, and Ernest Trova, and theme exhibitions such as Twentieth Century American sculpture have traveled to museums both in this country and abroad.

A major aspect of the collection is the 58 piece outdoor installation of the Martin H. Bush Sculpture Collection, named in honor of the founding director of the museum. The collection contains a cross-section of 19th and 20th century sculptures by artists such as Auguste Rodin, Henry Moore, Louise Nevelson, George Rickey, Lynn Chadwick, and Luis Jimenez, among others. The centerpiece of this outdoor collection is the mural, Personages Oiseaux, by the Spanish artist Joan Miro, located on the face of the museum building. Consisting of nearly one million pieces of Venetian glass and marble, the mural depicts whimsical bird characters that inhabit the imagination of the artist.

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Leadership Scholarship and provides financial assistance for child care through the Child Care Scholarship 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 and academic 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 Rates

Special rates for students are available for some campus activities. The following offices have ticket and price information: Rhatigan Student Center—on-campus movies; Duerksen Fine Arts Center (School of Music)—Wichita Symphony Orchestra and on-campus events; Wilner Auditorium—University Theatre; Henry Levitt Arena—athletic events; campus golf course—student golf rates.

Organizations

Academic
Alpha Kappa Psi (Business)
Alpha Psi Omega (Theatre)
American Institute of Aeronautics and Astronautics
American Marketing Association
American Production and Inventory Control Society (APICS)
American Society of Mechanical Engineers
Anthropology Club
Association of Collegiate Entrepreneurs (ACE)
Association for Computing Machinery
Criminal Justice Student Association
C.S. Lewis Socratic Society (English)
English Graduate Student Association (EGSA)
Friends of Women’s Studies
Geology Club
Institute of Industrial Engineers
International Business and Studies Association
Kansas Association of Nursing Students
Legal Assistants Society
Master's of Public Administration
- Student Association
- Mini-Baja Team
- Phi Delta Kappa (Education)
- Philosophy Society
- Physician Assistant Student Society
- Political Science Club
- Potters' Guild
- Psychology Club
- Psychology Graduate Student Organization (PGSO)
- Sculpture Guild
- Society for Human Resource Management
- Society of Automotive Engineers
- Society of Environmental Toxicology and Chemistry
- Society of Manufacturing Engineers
- Society of Public Historians
- Society of Women Engineers
- Speech and Debate
- Sport Administration Student Club
- Student Advertising Federation
- Student Art Education Association
- Student Music Teachers Association
- Student Organization of Social Work (SOSW)
- Student Physical Therapy Association
- Students in Free Enterprise (SIFE)
- Tau Beta Sigma (Band)
- Tutoring Association
- Women in Communication
- WSU Student Speech, Language, and Hearing Association
- WSU Visual Arts Guild

**Cultural/International**
- African Student Organization Association of Thai Students
- Chinese Student Friendship Association
- Global Learning Center
- Hispanic American Leadership Organization (HALO)
- Indian Students Association
- International Student Union
- Korean Student Association
- Latin American Association (ALIANSA)
- Native American Student Association
- Pakistani Students Association
- Russkii Kruzho, The Russian Club
- Scandinavian Student Organization
- Student Association of Bangladesh
- Taiwanese Student Association
- Turkish Student Association
- Wichita Singapore Association

**Governing/Representative Councils**
- Black Student Union
- Engineering Council
- Fine Arts Student Association
- Interfraternity Council
- National Pan-Hellenic Council
- Student Government Association
- Women's Panhellenic Association

**Greeks**
- Junior Greek Council
  - Fraternities
    - Beta Theta Pi
    - Delta Upsilon
    - Kappa Alpha Psi
    - Kappa Sigma
    - Omega Psi Phi
    - Phi Beta Sigma
    - Phi Delta Theta
    - Pi Kappa Alpha
    - Sigma Alpha Epsilon
    - Sigma Phi Epsilon
  - Sororities
    - Alpha Kappa Alpha
    - Alpha Phi
    - Delta Delta Delta
    - Delta Gamma
    - Delta Sigma Theta
    - Gamma Phi Beta
    - Sigma Gamma Rho
    - Zeta Phi Beta

**Honorary**
- Alpha Pi Mu (Industrial engineering)
- Emory Lindquist Honors Society (WSU Honors Program)
- Golden Key National Honor Society (Top 15%, juniors and seniors)
- Lambda Alpha (Anthropology)
- Lambda Pi Eta (Communications)
- Mortar Board (Senior honor society)
- Omicron Delta Kappa
- Order of Omega (Greek)
- Phi Alpha Theta (History majors)
- Phi Eta Sigma (Freshmen)
- Pi Delta Phi (French)
- Pi Mu Epsilon (Mathematics)
- Pi Tau Sigma (Mechanical engineering)
- Pinnacle (Non-traditional students)
- Psi Chi (Psychology)

**Senior Honor Men and Women**
- Sigma Gamma Epsilon (Science)
- Tau Beta Pi (Engineering)

**Political**
- College Republicans

**Residence Hall**
- Brennan Community Association
- Fairmount Towers Activities Council
- Residence Hall Association
- Wheatshocker Community Council

**Recreation/Sports Club**
- Aikido Club
- Bowling Team
- Collegiate Tae-kwon-do Club
- Crew Team
- Flying Club
- Hockey Club
- Men's Soccer Club
- Racquetball Club
- Rock Climbing Club
- Volleyball Club
- Wheelchair Sports Club
- Women's Soccer Club

**Religious**
- Baha’i Club
- Christian Challenge
- Christian Science Organization
- Christian Vanguard
- Fellowship of Christian Athletes
- First Baptist International Fellowship
- Intervarsity Christian Fellowship
- Muslim Student Association
- St. Paul Parish/Newman Center
- University Lutheran Ministry

**Special Interest/Social/Community Service/Other**
- Academic Challenge Club (SI)
- Leadership Council (SI)
- Model United Nations (SI)
- Non-Traditional Student Association
- Student Activities Council (O)
- Student Ambassador Society (SI)
- Student Health Advisory Council (SI)
- Ten Percent (SI)
- U.S.S. Jeannette Maddox—A Fan Association (SI)
- WSU Big Brothers and Sisters United (CS)
University College

James W. Kelley, PhD, Dean

The primary goal of University College is to assist students in their educational endeavors by providing relevant support services. Responding to the diverse needs and goals of both degree and nondegree-bound students requires a well conceived and flexible system of programs and services.

Students in University College are enrolled in courses offered by departments in the degree-granting colleges and taught by faculty from those departments. Exceptions are the courses offered by University College.

University College is the academic home for (1) all students working toward degrees who have not declared an academic major; (2) nondegree-bound adult students; (3) guest students attending other colleges and universities who wish to enroll at Wichita State on a temporary basis (for 15 hours only); (4) selected high school students who have the consent of their high school principals; and (5) students participating in the joint associate degree program between Wichita State University and the Wichita Area Technical College.

Degree-bound students are provided with academic support services which will enable them to make successful transitions to degree-granting colleges. While enrolled in University College, those who are seeking degrees are expected to develop educational planning skills, remove high school deficiencies, develop effective college-level study skills and habits, choose an academic major, develop personalized academic and career/life plans, and complete part of the general education requirements.

Nondegree-bound students receive services designed to be responsive to the unique needs, responsibilities, and learning styles of adult students. Programs, policies, and procedures emphasize ease of access to the University and its resources and opportunities for individual assistance.

Services focus on individuals who want to take courses for self-enrichment, career change, general updating, or professional certification. Academic and career advising also are provided for those students who may decide to work toward a degree after their initial enrollment.

University College services include orientation and educational planning programs; registration, advising, and consultation; college reading and study skills courses; adult seminars and career exploration seminars for individualized assessment and vocational exploration; and special programs targeted to specific student populations.

Admission to University College

Degree-bound Students: For more information on general University admission requirements, see the Admission to Wichita State section of the Catalog.

Nondegree-bound Students, Regular: Students who are not currently working toward specific undergraduate degrees at Wichita State are admitted as regular nondegree-bound students. To be admitted, they must submit high school transcripts or GED scores—and if they have attended college, college transcripts—to the Wichita State admissions office. Failure to report all previous schools attended will result in dismissal.

Nondegree-bound Students, Special (Open Admission). Adults may be admitted as special open-admission students for a maximum of 15 hours if:
1. They have graduated from high school and have not attended any school for two years or
2. They have not graduated from high school and are at least 21 years of age and
3. They are currently on active military duty or
4. They hold a bachelor's or higher degree.

Students admitted under the open-admission policy need only submit an application for admission. Test scores and transcripts are not required.

Students admitted under the open-admission policy will be considered non-degree bound for the first 15 semester hours. In order to pursue work beyond the semester in which the 15th hour is completed, students must declare themselves to be regular nondegree students in University College or they must apply for admission as degree-bound students in University College or one of the degree-granting colleges of the University. Transcripts of previous high school or college work (or GED scores) will be required at this point.

Academic Advising

Academic advising is more than class schedule building. It is an ongoing, shared relationship between student and advisor and is an essential part of the university experience.

Degree-bound Student: Every semester all degree-bound students enrolled in University College are expected to develop academic plans with the assistance of their academic advisors. Each degree-bound student is assigned an academic advisor. When a student declares a major field of study, he or she is immediately transferred to a degree-granting college where an academic advisor from the department offering that area of study is assigned. Deciding students who have not declared a major area of study are assigned to members of the faculty and staff with academic advising responsibility in University College.

Nondegree-bound Students: Nondegree-bound students normally are not required to see an advisor or counselor for course approval before registration if they meet course prerequisites. However, students are encouraged to seek advice if they have questions or uncertainties about the type of course in which to enroll. Those students who are considering the possibility of transferring to degree programs at a later date should discuss their plans with an academic counselor to be sure that they are developing the best possible educational foundation.

Special Programs

Because of its metropolitan setting and mission, Wichita State enrolls students with diverse backgrounds, aspirations, and levels of educational attainment. In University College, special programs are designed to respond to the individual needs of students. As students seek to establish a foundation upon which their individual talents are developed and as they explore educational and career options through the university experience, special programs have been designed to support targeted student populations. Programmatic goals and
University College Outreach Services
Wichita State is active in reaching out to its constituents in the larger community. University College assists this University effort through its business and industry visits which provide generalist advising, information, and referrals. University College also serves as the WSU liaison for the joint associate degree program between WSU and the Wichita Area Technical College, and assists those students with WSU enrollment, advising, and graduation activities. Other college activities include meeting advising assistance needs at the WSU centers, coordinating the Servicemembers Opportunity Colleges program, and providing on-campus support to the degree-granting colleges and the University community.

General Education Program
Degree-bound students at Wichita State are required to receive credit in a specific number of semester hours of general education courses. Wichita State’s requirements are based on the conviction that college graduates should be exposed to a broad sampling of knowledge about themselves and the world in addition to their major or discipline.

Specifically, the General Education Program offers a variety of opportunities to acquire and apply knowledge; to think critically; to solve problems; to clarify values; to communicate within a variety of settings; and to understand the role of science, technology, and the arts.

The General Education Program is the means by which students obtain knowledge and skills which are permanent, practical, and transferable, and which cannot be rendered obsolete either by changes in technology or by the expansion of knowledge. These are the key elements of a university education which are intended to prepare a student for the first job after graduation, and for a lifetime.

Nondegree-bound students are eligible also to take advantage of the opportunities offered through the General Education Program. Students are invited to visit with an academic counselor in University College to learn more about the classes which make up this program. Students considering the possibility of a degree program at some future date should be aware of the manner in which general education fits into a degree program.

Policies
First Semester—Transition Semester
Because there is a special period of transition and adjustment to university life, students in their first semester of college work may choose a special option of translating letter grades into credit or no credit at the conclusion of the first semester, as discussed under the Academic Information—Transition Semester section of the Catalog.

Enrollment Limits
Students in University College in good academic standing may enroll for a maximum of 21 hours during fall and spring semesters and a maximum of 12 hours during the summer. Students wishing to enroll beyond these limits will need specific approval from the dean or associate dean of University College.

Transferring to a Degree-Granting College
Degree-bound Students: All students seeking a degree are expected to qualify for transfer to one of the six undergraduate degree-granting colleges.

Students who have declared a major are transferred automatically to the college of their intended major.

Degree-bound students may not continue in University College after the semester in which they complete 48 semester hours.

Nondegree-bound Students: Those students not seeking degrees may remain in University College beyond 48 hours.

Those who subsequently wish to work toward Wichita State bachelor's degrees may transfer their credits to an undergraduate degree-granting college.

Probation and Dismissal Standards
Probation: Since a 2.000 (C) average is required for graduation, students are placed on academic probation whenever they have attempted six hours and their WSU grade point average falls below 2.000. (An explanation of terms used in this section is found in the Academic Information section of the Catalog.) The transition semester counts toward the number of hours attempted but does not count in the calculation of the grade point average used to assess probation or dismissal.
Transfer students admitted on probation must complete at least 12 semester hours of credit work and achieve a 2.00 grade point average on work at Wichita State before probation is removed.

Students on probation normally are limited to a maximum load of 12 hours per semester, although exceptions may be made by the Dean of University College. The limitation of 12 hours also applies to students who have declared a transition semester.

Dismissal: All University College students who have accumulated 12 attempted credit hours after being placed on probation (unless other standards were specified as a condition of admission or readmission) and who do not have a 2.00 grade point average for the most recent semester or Summer Session will be academically dismissed. Once degree-bound students accumulate 48 hours, they will be transferred or dismissed from University College. The grading system is explained in the Academic Information section of the Catalog.

Readmission after Academic Dismissal
Students who have been academically dismissed may seek readmission to University College by appealing, in writing, for an exception to the regulations. University College requires petitioners to meet with an academic counselor for a personal interview and to prepare a written petition which is considered by the University College Exceptions Committee and then forwarded to the University’s Committee on Admissions and Exceptions for final action.

Because counseling and advanced planning require careful attention and much time, students must secure their recent academic records, complete their petition satisfactorily, and have had their final readmissions interview at least ten days before the first day of enrollment. Interviews are not conducted during any of the scheduled registration sessions.

Cases for readmission must be developed by the students. They should center their petitions around explanations for their failures and presentations of evidence for their future successes.

University College Courses

100. Freshman Seminar. (1) A study of the University as a resource for personal development and the development of an individual master plan for study and self-development in the University. Offered Cr/NC only.

100A. Adult Seminar. (1) A special class for adults who have been out of school one year or more. Helps adults learn more about themselves and about Wichita State University. Covers career information, interest testing and interpretation, educational planning, and other activities. Offered Cr/NC only.

100P. Parents’ Course. (1) Studies issues and experiences which confront new students at Wichita State University, how these issues may impact on parents and how parents can be constructively supportive during this major, new life experience. Offered Cr/NC only.

101. Introduction to the University. (3) Helps students make connections with academic programs, faculty, staff, and other students; develop required academic and career competencies; and make sense of the higher education environment.

102. Topics in Career Exploration. (2) Involves students in the career/life, educational planning and decision-making process based on career development theories. Uses various assessments and exercises to explore values, interests, and skills as they relate to career choice. Students research occupations and gain knowledge of labor market trends. Course content assists in exploration of college major and career path choice or change. Addresses current workplace issues. Offered Cr/NC only.

150. Workshop: Special Topics. (1-3) Meets identified needs of specific audiences. Offered Cr/NC only.

160. Reading and Study Skills. (3) For any student who seeks to enhance his/her college-level reading speed, reading comprehension, and study skills. Other topics include time management, note-taking skills, and test-taking strategies which prepare students for both university course work and our fast-paced society. Offered Cr/NC only.

170. Introduction to Library Research. (1) Helps students become familiar with the University libraries and their resources in print and electronic formats. Intended for first year students. Promotes independence in retrieving information and involves students in the process of thinking critically about library research. Course meets for half a semester. Offered Cr/NC only.
W. Frank Barton School of Business

Gerald H. Graham, PhD, Dean

The mission of the W. Frank Barton School of Business is to add value to students and to advance the practice of business through:
- offering undergraduate and graduate programs,
- conducting basic, applied, and instructional research,
- performing service that facilitates economic and personal development, and
- capitalizing on our metropolitan location.

The vision of the W. Frank Barton School of Business is to be recognized as the best source of high quality business education, prospective employees, scholarly research, and business development services in the community, state, and region.

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 faculty of the Barton School of Business are committed to programs and activities that will help sustain the contribution that this urban center makes to the economic, professional, and cultural health of the state and nation.

Within this context, the faculty of the school have adopted the following educational goals of the Barton School which are listed below under the headings of Students, Faculty, 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 a learning environment 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. To increase quality and quantity of students.

Faculty: Faculty are the means by which the University creates a learning environ-
ment. 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 programs that are relevant, competitive, and up-to-date.

The school is a member of AACSB—the International Association for Management Education; its undergraduate and graduate programs are accredited by this organization.

Degrees Offered

Undergraduate

Bachelor's
The undergraduate curriculum of the Barton School of Business leads to the Bachelor of Business Administration (BBA). Areas of emphasis or majors are offered in several fields within the School of Accountancy and the following departments: economics; finance, real estate, and decision sciences; management; and marketing and entrepreneurship.

Students may obtain a second bachelor's degree in the Barton School of Business if they: (1) complete a minimum of 30 hours in residence in the Barton School of Business (in addition to the work required for the first bachelor's degree) and (2) satisfy the school's general requirements and emphasis/major requirements in effect at the time they embark on the program leading to a second bachelor's degree.

Associate of Science
A two-year program in legal assistant training, which leads to the Associate of Science, is available. The legal assistant program is offered by the Department of Finance, Real Estate, and Decision Sciences.

Graduate

Master's degree programs in the school lead to the Executive Master of Business Administration (EMBA), Master of Business Administration (MBA), Master of Professional Accountancy (MPA), Master of Science (MS) in business, and the Master of Arts (MA) in economics.

For additional information on graduate programs, see the Wichita State University Graduate Bulletin and the Barton School of Business—Master of Professional Accountancy section of the Catalog.

Business Emphasizes

In Other University Programs

Students in Fairmont College of Liberal Arts and Sciences may major in economics. Students from all colleges may minor in accounting, business administration, economics, entrepreneurship, finance, management, and marketing. Students in the College of Education may minor in economics or accounting. A minor in business administration is not available to students pursuing a degree in the Barton School of Business.

A field major in international studies is offered in cooperation with Fairmont College of Liberal Arts and Sciences for students interested in specializing in a foreign area of the world or in international business, economics, or affairs. The major prepares students for careers in international organizations within the U.S. government and in business firms. Additionally, a cooperative chemistry/business program is offered in the Department of Chemistry.

The Barton School of Business provides the organizational administration course work for the degree program in health care administration offered through the College of Health Professions. This program prepares students to be qualified health care administrators in one of the many types of health facilities.

Policies

Admission

Pre-program. Degree-bound students who select a business major will enter the college as pre-program students. To remain in the pre-program category in the School of Business, a student must maintain at least a 2.00 grade point average. For more information on general University admission requirements, see the Admission to Wichita State section of the Catalog.

Program status in the Barton School of Business is available to students from University College, degree-granting colleges within the University, or other uni-
versities and colleges, provided the student has (1) completed 24 semester credit hours; (2) a cumulative grade point average of 2.250; and (3) completed six hours of English composition, three hours of communication, and three hours of college algebra with a grade of C or better in each.

Advanced standing in the Barton School of Business is available to students who have (1) completed 60 semester hours; (2) a cumulative grade point average of 2.250; (3) completed six hours of elementary accounting, six hours of elementary economics, business statistics, business calculus, and a business computer course; and (4) declared a professional major in the school. For degree-seeking students in the Barton School of Business, advanced standing is a prerequisite for all upper-division courses in the school.

Transfer students planning to transfer into the Barton School of Business from another two- or four-year institution to obtain the BBA are advised to complete as much of Wichita State's general education requirements as possible before transferring. The following course areas are recommended for the first two years of college work:

Mathematics
- College algebra (3 hours)
- Survey of calculus (3 hours)

Communication
- Composition (6 hours)
- Speech (3 hours)
- Fine arts (3 hours)

Humanities (9 hours)

Social sciences
- Principles of economics (6 hours)
- Psychology, sociology, anthropology, political science (3 hours)

Business
- Introductory accounting (6 hours)
- Business microcomputers (3 hours)
- Business statistics (3-4 hours)
- Nonbusiness electives (10 hours)

Transfer students should be aware that 50 percent of their business course work must be taken at Wichita State University.

Probation and Dismissal

Pre-program students are required to maintain at least a 2.000 (C) average. Students are placed on academic probation whenever they have attempted six hours and their WSU grade point average falls below 2.000. The transition semester counts toward the number of hours attempted but does not count in the calculation of the grade point average used to assess probation or dismissal.

Transfer students admitted on probation must complete at least 12 semester hours of credit work and achieve a 2.000 grade point average on work at Wichita State before probation is removed.

Students on probation normally are limited to a maximum of 12 hours per semester, although exceptions may be made by the Dean of the School of Business. The limitation of 12 hours also applies to students who have declared a transition semester.

All pre-program students who have accumulated 12 attempted credit hours after being placed on probation and who do not have a 2.000 grade point average for the most recent semester or Summer Session will be academically dismissed. Students who have been dismissed may seek readmission to the School of Business by appealing, in writing, for an exception to the regulations.

Program status: Students are placed on probation at the end of any semester in which they do not have a WSU cumulative grade point average of 2.250. Probation is removed when their WSU grade point average reaches the 2.250 level. Students remain on probation if (1) they earn a 2.000 or better grade point average in the semester during which they are on probation, and (2) their WSU cumulative grade point average does not fall below 2.000. Students on probation because of a deficient cumulative grade point average may not be academically dismissed until they accumulate 12 or more attempted hours after being placed on probation.

Students on probation are dismissed from the Barton School of Business if they fail to meet the requirements of their probationary status. When dismissed, students must apply to the Barton School of Business Exceptions Committee to be considered for readmission on a final probationary status. Application should be made in the student records office, 106 Clinton Hall.

Extension or Correspondence Work

Not more than six hours of the last 30 hours or ten of the total number of hours required for graduation may be in extension or correspondence courses. Permission of the dean must be secured before a student may take such courses. No extension or correspondence courses are allowed that (1) duplicate courses required for any degree granted by the school, (2) are required for any emphasis within the school, or (3) are offered at the junior or senior level in the school.

Limitations on Student Load

Initially admitted Barton School of Business students are limited to a maximum of 16 hours, to which may be added one hour of physical education. Students admitted to advanced standing in the college are limited to a maximum of 18 hours, to which may be added one hour of physical education.

All Barton School of Business students are limited to enrollment in one course during a summer presession, one course in any four-week summer session and two courses in any eight-week summer session. If a student is enrolled in both an eight-week and a four-week summer session, the maximum enrollment is two courses.

Cooperative Education

The Barton School of Business participates in the University Cooperative Education program. The program is designed to provide relevant paid employment experiences that integrate, complement, and enhance the student's academic program. Students are placed in co-op positions in a variety of business settings, including government agencies, financial institutions, social agencies, accounting firms, entrepreneurial companies, and many others. Individual academic projects are formulated in consultation with the student's faculty advisor. Co-op placements must be approved by the student's faculty sponsor. Participation in the co-op program requires enrollment in designated courses having prerequisites. More information is available from the business coordinator in the Cooperative Education office.

Advising

The focus of advising in the Barton School of Business is to help students progress toward their educational objectives. The school's advising system offers:

1. Transcript evaluation for transfer students and continuous monitoring of degree progress for all students
2. Suggestions of specific courses to be selected in a given semester or summer session
3. Program planning designed to outline an entire course of study
4. Referral to appropriate University resources for students seeking career guidance, personal counseling, or other types of assistance.
Advising is designed to provide assistance where desired and appropriate. Students, especially those nearing graduation, are encouraged to make full use of the system.

Types of Advising Assistance Available

- Transcript Evaluation: Two aspects of transcript evaluation affect students: (1) the evaluation of course work to be transferred to Wichita State University for a degree, and (2) the continuing evaluation of completion of graduation requirements.

- Evaluation of Transfer Work: Initially accomplished by the University's office of admissions. Evaluation of business and economics course work is done by the school's student records office, 106 Clinton Hall, working in conjunction with the dean's office and the various departments within the school.

The student records office also keeps a current record of each student's progress at Wichita State University. Many students will be able to take advantage of the school's automated degree audit system. This on-line system provides students a personal copy of their academic record, including work in progress.

- Schedule-Building: Schedule-building is the determination of specific courses a student should take in a given semester. Students should refer to the Wichita State University Schedule of Courses and Catalog in consultation with a faculty advisor or staff of the school's advising center to determine a specific course of study. Selection of specific sections and of times for courses is the student's responsibility. The tentative schedule must be approved by an advisor.

- Program Planning: Students are encouraged to outline an entire plan of study early in their academic career. This program planning activity is provided by the advising center and includes suggested model programs for each of the major fields of study offered by the school.

- Counseling: Students seeking career guidance, personal counseling, or other types of assistance will be directed to the appropriate University office by the staff of the advising center.

Where to Find Advising Assistance

Office of the Dean (100 Clinton Hall). Students should come to the Office of the Dean for special advising assistance that cannot be resolved at locations described below and to file appeals and waiver requests relative to school and University regulations. The dean's office also will refer students to the appropriate office.

should the student be unsure as to where to find assistance.

Undergraduate Academic Advising Center (114 Clinton Hall). The Academic Advising Center is staffed to provide assistance in understanding degree program requirements, planning an entire academic course of study, designing a course schedule for a particular semester, and providing referrals to other University offices for assistance as appropriate.

Student Records Office (106 Clinton Hall). The Student Records Office maintains a complete and updated file for each student admitted to the Barton School of Business.

Legal Assistant Majors (100 Clinton Hall). All legal assistant majors are advised by the associate director of the Legal Assistant Program. Appointments should be made in 325 Clinton Hall.

Academic Honesty

The faculty of the Barton School of Business strongly endorses the statement on academic honesty appearing in the general information section of this Catalog.

Graduation Requirements

Bachelor of Business Administration

Candidates for the Bachelor of Business Administration degree must satisfy the following Barton School of Business requirements:

1. Complete at least 62 hours of course work offered outside the school (Econ. 201Q-202Q, 231, and one upper-division economics elective course count as course work outside the school). Any course that is cross-listed with a business course is considered to be a business course and does not count as non-business hours. Students may, however, choose to have one upper-division economics course count as a non-business course.

2. Complete at least 50 semester hours of course work offered by the Barton School of Business.

3. Complete the set of core requirements specified for the Bachelor of Business Administration, given later in this section.

4. Complete the requirements for a major in the Barton School of Business.

5. Complete at least 50 percent of the total hours required by 3) and 4) above at Wichita State University. (The following core courses are excluded in computing the 50 percent requirement: Math. 111 and 144/242Q; Econ. 201Q, 202Q, 231, and one upper-division economics elective.)

6. Achieve a grade point average of 2.250 or better on (a) all college work, (b) all work taken at Wichita State, (c) all business and economics courses, (d) all business and economics courses taken at Wichita State, (e) all courses counted toward the student's major/emphasis, and (f) all courses counted toward the student's major/emphasis taken at Wichita State.

Three levels of requirements must be completed to receive a BBA: (1) University general education and graduation requirements, listed in the Academic Information section of the Catalog, (2) general requirements in the Barton School of Business, and (3) school major requirements. Students should complete the requirements in the order listed, with some overlap and duplication of courses among the three levels.

The following sequence of required courses is recommended:

Freshman Year

Math. 111, College Algebra
Math. 144, Business Calculus
Engl. 101-102, College English I-II
Comm. 111, Public Speaking
General education electives

Sophomore Year

Acct. 210, Financial Accounting
Acct. 220, Managerial Accounting
Acct. 260, Introduction to Information Processing Systems for Business
Econ. 201Q-202Q, Principles of Macro- and Micro-Economics
Econ. 231, Introductory Business Statistics
General education electives

Junior Year

DS 350, Introduction to Production and Operations Management
DS 495, Management Information Systems for Business
Fin. 340, Finance
Mgmt. 360, Management and Organizational Behavior
Mkt. 300, Marketing
Upper-division business law course
Upper-division economics course
Major courses

Senior Year

Mgmt. 430, Business, Government and Society
Mgmt. 681, Strategic Management
Major courses

Students graduating from the Barton School will take at least one behavioral science course from the following list: Mgmt. 362, 462, 661, 662, 663, 680; Mkt. 305; Psys. 111; Soc. 111.

Students planning to enroll in upper-division business courses (courses num-
bered 300 to 600) must have completed 60 semester credit hours and met the requirements for advanced standing. Accreditation of the school by AACSB stipulates that students should be classified as juniors to enroll in upper-division courses. Exceptions are made to this requirement for any of the following:
1. Students who have close to 60 hours and have enrolled in the required lower-division (100-200 level) courses may enroll in introductory upper-division courses to complete a full schedule.
2. Students with a cumulative grade point average of 3.250 or above may have the junior standing prerequisite waived with the consent of the instructor of the course and the chairperson of the department in which the course is taken.
3. Students may petition the school's Exceptions Committee for special permission to enroll in upper-division courses.

The suggested sequence of courses includes classes which are part of the Barton School of Business core requirements. The core courses required for the BBA are:

I. Foundation Knowledge for Business
A. Accounting
   - Acct. 210, Financial Accounting*
   - Acct. 220, Managerial Accounting*
   - Acct. 260, Introduction to Information Processing Systems for Business*
B. Behavioral Science
   - Mgmt. 360, Management and Organizational Behavior
C. Economics
   - Econ. 201Q*-202Q*, Principles of Macro- and Micro-Economics and one upper-division economics course
D. Mathematics and Statistics
   - Math. 111, College Algebra*
   - Math. 144, Business Calculus*
   - Math. 242Q, Calculus I will be accepted in lieu of Math. 144*
   - Econ. 231, Introductory Business Statistics*
II. Environment of Business—provides an understanding of the perspectives that form the context for business
   - B. Law 431, Legal Environment of Business or
   - B. Law 435, Law of Commercial Transactions and
   - B. Law 436, Law of Business Associations
   - Mgmt. 430, Business, Government and Society
III. Business Functions
   - Mkt. 300, Marketing
   - Fin. 340, Finance

DS 350, Introduction to Production and Operations Management
DS 495, Management Information Systems for Business

IV. Business Policy
   - Mgmt. 681, Strategic Management

In addition, University graduation requirements include courses designed to help develop written and oral communication skills (Engl. 100 or 101, Engl. 102, and Comm. 111). These courses must be completed with a grade of C or better.

* These courses are prerequisites for upper-division courses.
Note: Any faculty member teaching an upper-division course in the Barton School of Business may assume that all students have completed the specific courses listed under Freshman Year and Sophomore Year above.

First-Year Course
BA 190A, The Right Start: Becoming a Master Student, is a 3-credit-hour course specifically designed for first-year business students. Extensive research indicates that students who take a course like this
1. make vital connections to university faculty and resources,
2. are more likely to complete their degree,
3. do better academically, and
4. enjoy their university experiences more.
A complete course description appears on page 52.

Major/Minor Areas
Candidates for the BBA degree must satisfy the additional requirements of one of the following curricular majors. All students may avail themselves of the indicated minors. The minimum grade point average for a minor field of study shall be the same as the minimum grade point average required for graduation with a major in the same field.

School of Accountancy
Two degree programs are offered by the School of Accountancy—the Master of Professional Accountancy (MPA) and the Bachelor of Business Administration with an accounting major. In addition, a minor in accounting is available to students who are not accounting majors. For information about the Master of Professional Accountancy degree, see the Barton School of Business—Master of Professional Accountancy section of the Catalog. Undergraduate students may begin work leading toward the MPA degree early in their academic career.

MPA—Preprofessional Program Major
For a description of the undergraduate course work in the preprofessional component of the MPA degree program, see the Barton School of Business—Master of Professional Accountancy section of the Catalog.

BBA—Accounting Major
Requirements for a major in accounting within the Bachelor of Business Administration degree are as follows:

Course Hrs.
Acct. 310, Financial Accounting and Reporting: Assets .......... 3
Acct. 320, Accounting for Decision Making and Control .......... 3
Acct. 410, Financial Accounting and Reporting: Equities .......... 3
Acct. 430, Introduction to Federal Income Tax .................. 3
Acct. 560, Accounting Information Systems ....................... 3
Acct. 610, Financial Accounting and Reporting: Special Entities and Complex Issues .......... 3
Acct. 620, Accounting for Strategic Support and Performance Evaluation .......... 3
Acct. 630, Taxation of Business Entities .......... 3
Acct. 640, Principles of Auditing .......... 3
Upper-division economics elective .............................. 3
Engl. 210, Composition: Business, Professional and Technical Writing .......... 3

Accounting Minor
A minor in accounting is available to any student whose major field or area of emphasis is outside of accounting. A minor in accounting consists of Acct. 210, 220, 260, and 9 hours of upper-division accounting.

Business Administration Major
Required Courses: Hrs.
A minimum of 15 hours must be selected from courses listed below and distributed over four of the five areas ........................................ 15
Acct. 310, Financial Accounting and Reporting: Assets (3); Acct. 320, Accounting for Decision Making and Control (3); Acct. 410, Financial Accounting and Reporting: Equities (3); Acct. 430, Introduction to Federal Income Tax (3).
Econ. 304, Managerial Economics (3); Econ. 340, Money and Banking (3); Econ. 661, Collective Bargaining and Wage Determination (3); Econ. 672, Introduction to International Economics and Business (3).
Fin. 620, Investments (3); Fin. 631, Money and Capital Markets (3); Fin.
A minor in economics is available to any student whose major field or area of emphasis is outside of economics. A minor consists of 15 hours of economics including Econ. 201Q and 202Q (or equivalent) and 9 hours of upper-division economics.

Teaching of Economics: Kansas Department of Education regulations governing the certification of secondary economics teachers are very specific and contain requirements beyond the economics major. Students planning to teach economics should contact a secondary social studies advisor in the College of Education for program planning.

Entrepreneurship Minor
A minor in entrepreneurship consists of 15 hours of entrepreneurship courses including Entre. 150Q or 160Q. Credit will be awarded for only one of the two courses.

Entre. 150Q, Entrepreneurship: Your Future in Business ....... 3
or
Entre. 160Q, Introduction of Entrepreneurship .......... 3
Entre. 320, Principles of Entrepreneurship .......... 3
Entre. 420, Developing a New Venture Marketing Plan .... 3
Entre. 620, Growing and Managing an Entrepreneurial Firm .... 3
Entre. 668, Developing a Successful Business Plan .... 3

Finance Major
Department of Finance, Real Estate, and Decision Sciences
The major requires 21 hours beyond the college core. An emphasis in Bank Management or Real Estate may be obtained within the finance major. In addition, the department also offers a finance minor. All finance majors are required to complete Econ. 340, Money and Banking, as part of the general education core requirements.

Required Courses: Hrs.
Entre. 481, Cooperative Education .... 3
Fin. 440, Financial Management II .... 3
Fin. 660, Cases in Finance .... 3
**Human Resource Management Major**

Department of Management

**Required Courses:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>HRM 466, Fundamentals of Human Resource Management</td>
<td>3</td>
</tr>
<tr>
<td>HRM 464, Labor Relations</td>
<td>3</td>
</tr>
<tr>
<td>HRM 666, Human Resource Selection</td>
<td>3</td>
</tr>
<tr>
<td>HRM 668, Compensation</td>
<td>3</td>
</tr>
<tr>
<td>HRM 669, Training and Development</td>
<td>3</td>
</tr>
<tr>
<td>Electives, from the following</td>
<td>6</td>
</tr>
<tr>
<td>Econ. 661, Collective Bargaining</td>
<td></td>
</tr>
<tr>
<td>Mgmt. 462, Leading and Motivating</td>
<td></td>
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<tr>
<td>Mgmt. 464, Communicating Effectively in Organizations</td>
<td></td>
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<tr>
<td>Mgmt. 660, Designing Effective Organizations</td>
<td></td>
</tr>
<tr>
<td>Mgmt. 661, Coaching, Developing, and Mentoring</td>
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<tr>
<td>Mgmt. 662, Managing Workplace Diversity</td>
<td></td>
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<tr>
<td>HRM 466, Fundamentals of Human Resource Management</td>
<td></td>
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<tr>
<td>IOM 660, Making Effective Decisions</td>
<td></td>
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<tr>
<td>HRM 466, Human Resource Selection</td>
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</tbody>
</table>

**Directed Electives:**

Two of the following courses selected in consultation with the student's major advisor

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
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<tbody>
<tr>
<td>Econ. 615, Economics of Transportation and Development</td>
<td>6</td>
</tr>
<tr>
<td>IB 500, International Management</td>
<td></td>
</tr>
<tr>
<td>IB 601, International Marketing</td>
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</tr>
</tbody>
</table>

**Upper-division business elective**

**Management Information Systems Major**

Department of Finance, Real Estate, and Decision Sciences

The MIS major consists of the following courses

**Required Courses:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acct. 260, Introduction to Information Processing Systems for Business or computer science equivalent</td>
<td>3</td>
</tr>
<tr>
<td>MIS 200, Fundamentals of Programming and Programming Languages</td>
<td>3</td>
</tr>
<tr>
<td>MIS 250, Fundamentals of Data Structures, File Design, and Access</td>
<td>3</td>
</tr>
<tr>
<td>MIS 300, Data Communications and Computer Networks</td>
<td>3</td>
</tr>
<tr>
<td>MIS 350, Systems Analysis and Design</td>
<td>3</td>
</tr>
<tr>
<td>MIS 600, Database Management Systems</td>
<td>3</td>
</tr>
<tr>
<td>MIS 650, Problem Solving, Decision Support, and Expert Systems</td>
<td>3</td>
</tr>
<tr>
<td>MIS 696, Management of the IS Function</td>
<td>3</td>
</tr>
</tbody>
</table>

**Finance Minor**

A minor in finance consists of 15 hours, including Fin. 340, Fin. 440, Acct. 210, and six additional hours of finance courses (real estate courses will not count). At least six hours of upper-division finance courses must be taken in residence.
Marketing Major
Department of Marketing and Entrepreneurship

Required Courses: Hrs.
Mkt. 403, Marketing Research .............. 3
Mkt. 405, Consumer Behavior .................. 3
Mkt. 609, Marketing Programs .............. 3
Electives, from the following: .............. 6
Mkt. 404, Retail Management
Mkt. 407, Marketing for Service and Nonprofit Organizations
Mkt. 601, International Marketing
Mkt. 604, Distribution Management
Mkt. 606, New Product Marketing
Mkt. 607, Promotion Management
Mkt. 608, Selling and Sales Force Management
Electives, selected with consent of major advisor .............. 6

Marketing Minor
A minor in marketing consists of 15 hours, including Mkt. 300, 405, and 609, and 6 hours of upper-division marketing courses chosen from Mkt. 403, 404, 407, 601, 604, 605, 606, 607, and 608. At least 9 hours must be taken at WSU with at least a 2.25 GPA in these courses.

Master of Professional Accountancy
The Master of Professional Accountancy 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.

Students not possessing a bachelor's degree will receive both a Bachelor of Business Administration degree and a Master of Professional Accountancy degree at the time of graduation.

The MPA 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 director of the School of Accountancy to learn the approximate length of time it would take to earn the degree.

Professional Designations. Students interested in accounting may pursue several different professional designations. The designation Certified Public Accountant (CPA) requires that the candidate pass the Uniform CPA Examination and meet the requirements of Kansas law and the regulations of the Kansas State Board of Accountancy (or the relevant state of residence/practice, if not Kansas). The areas tested on the examination include auditing, business law, and accounting theory.

The Certificate in Management Accounting (CMA) requires that the candidate pass the CMA examination and meet the requirements of the Institute of Certified Management Accountants. The areas tested include economics and business finance; organization and behavior, including ethical considerations; public reporting standards, auditing, and taxes; internal reporting and analysis; and decision analysis, including modeling and information systems.

The designation Certified Internal Auditor (CIA) requires no specified course work prior to sitting for the examination. The areas tested on this examination are principles of internal auditing, internal audit techniques, principles of management, and disciplines related to internal auditing.

Additional information on these professional designations may be obtained from the School of Accountancy.

Admission Requirements
Admission to the MPA 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. Students in the second category should see the Graduate Bulletin for further information.

Full admission to the MPA 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, and 430.
4. A total of 1,100 points based on the formula of 200 times the overall grade point average (4.000 system) on the last 60 hours plus the Graduate Management Admission Test (GMAT) score.

Students who meet all the requirements above except for the GMAT score may be admitted to the MPA professional curriculum on a conditional basis. These nine hours must be completed in the first semester following conditional admission or as soon thereafter as course scheduling permits.

Probationary Admission
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 MPA program requirements and have the potential for a successful career in professional accounting.

Degree Requirements—Students Not Possessing a Bachelor's Degree at Time of Admission

Preprofessional Curriculum
Students pursuing the Master of Professional Accountancy (MPA) 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 nonbusiness courses, for 62 semester hours. The following courses are specifically required by the School of Accountancy and may be counted within this 62 hours:
   - Econ. 201Q and 202Q, Principles of Economics I and II .............. 6
   - Upper-division economics course .............. 3
   - Engl. 210, Composition: Business, Professional and Technical Writing .............. 3
   - Math. 111, College Algebra .............. 3
   - Math. 144, Business Calculus .............. 3
   - Comm. 111, Public Speaking .............. 3

2. The candidate must complete a minimum of 25 hours of the following Barton School of Business core requirements:
   - Acct. 210, Financial Accounting .............. 3
   - Acct. 220, Managerial Accounting .............. 3
   - Acct. 260, Introduction to Information Systems for Business .............. 3
   - DS 350, Introduction to Production and Operation Management .............. 3
   - DS 495, Management Information Systems .............. 3
   - Econ. 231, Introductory Business Statistics .............. 3
   - Fin. 340, Finance .............. 3
   - Mgmt. 360, Management and Organizational Behavior .............. 3
### 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. As 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 number 800 or above.

In general, we presume an undergraduate degree in business with a major in accounting equivalent to that required at Wichita State University. See page 47 for details. If a person is admitted without sufficient background, that person’s total degree program will be adjusted upward to satisfy any deficiencies.

The following graduate-level course work must be completed:

- **Acct. 815, Financial Accounting and Reporting: Contemporary Issues**
- **Acct. 825, Management Control Systems**
- **Acct. 835, Tax Research and Selected Topics**
- **Acct. 840, Advanced Principles of Auditing**
- **Acct. 860, Advanced Accounting Information Systems**
- **Electives outside accounting, selected with consent of graduate accounting advisor**

Additional electives, accounting or nonaccounting, selected with consent of graduate accounting advisor.

A minimum of 21 semester hours must be in course work numbered 800 or above.

### Associate of Science in Legal Assistant

A legal assistant program is offered through the Department of Finance, Real Estate, and Decision Sciences to prepare students for law-related employment in law firms, corporations, and government. The 64-hour program is geared to the role concept of the legal assistant who is not a lawyer but who is trained to handle extensive professional responsibilities under the supervision of a lawyer. Some of the tasks a graduate of the program might be expected to perform are legal research, preparing briefs, interviewing clients and witnesses, preparing corporate instruments, drafting wills and probate instruments, drafting pleadings and interrogatories, filling papers, assisting in trial preparation, and numerous other matters of challenge and responsibility.

The program has been granted approval by the American Bar Association.

### Degree Program Admission

Students seeking admission to the Legal Assistant Program must meet the general entrance requirements of WSU, the initial requirements of the Barton School of Business, and the special requirements of the Legal Assistant Program.

Initial admission to the Barton School of Business requires (1) completion of 24 semester credit hours, (2) a cumulative grade point average of 2.250, and (3) completion of six hours of English composition, three hours of communication, and three hours of college algebra with at least a grade of C in each course. Students may apply for admission to the Legal Assistant Program during the semester that these requirements will be completed.

Admission to the program involves these steps: (1) completion of an application for admission, including documentation of the GPA and specific course work listed above, and (2) completion of an admissions interview with the director or associate director of the program. In the event there are more applicants than the program can reasonably accommodate, the program reserves the right to set up admissions quotas. In such circumstances, applicants will be evaluated on the basis of academic record. Thus far, this procedure has not been necessary.

The associate director/advisor is available to counsel beginning and advanced students to ensure their basic skills and general education course work progress toward the legal courses in a logical and meaningful way. Appointments for pre-registration are recommended.

### Nondegree and Single Course Admission

Students not pursuing the degree program are required to complete a special admission form. The student must identify the particular course or courses, the reason for seeking admission and the background which is the basis for a request for waiver of any stated prerequisites.

Such special admissions are evaluated against the following criteria: (1) whether the purpose of the student conforms to the objectives of the program, (2) whether the student has the background necessary to handle the course and not impedes the class, and (3) if there is space available.

### Degree Requirements

The degree requirements for the Associate of Science in Legal Assistant are summarized as follows:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
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<tr>
<td>I. General Education Requirements</td>
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<tr>
<td>Basic Skills</td>
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<tr>
<td>Eng. 101 and 102, College</td>
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<tr>
<td>English I and II</td>
<td>3</td>
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<tr>
<td>Comm. 111, Public Speaking</td>
<td>3</td>
</tr>
<tr>
<td>Math. 111, College Algebra</td>
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</tr>
<tr>
<td>Humanities and Fine Arts</td>
<td>3-12</td>
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<tr>
<td>Social and Behavioral Sciences</td>
<td>3-12</td>
</tr>
<tr>
<td>Mathematics and Natural Sciences</td>
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<tr>
<td>II. Professional Curriculum</td>
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<td>A. Required Courses</td>
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<tr>
<td>B. Law 130Q, Introduction to Law</td>
<td>3</td>
</tr>
<tr>
<td>Legal 230, Introduction to Paralegalism</td>
<td>2</td>
</tr>
<tr>
<td>*Legal 231A, Legal Research and Writing I</td>
<td>3</td>
</tr>
<tr>
<td>*Legal 233, Litigation I</td>
<td>3</td>
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<td>*Legal 240, Substantive Law: Torts</td>
<td>3</td>
</tr>
<tr>
<td>Acct. 210, Financial Accounting I</td>
<td>3</td>
</tr>
<tr>
<td>B. Required Courses or Validated Equivalents</td>
<td>6</td>
</tr>
<tr>
<td>Legal 238, Legal Assistant Internship</td>
<td>2</td>
</tr>
<tr>
<td>Legal 244, Legal Assistant Computer Skills</td>
<td>3</td>
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</tbody>
</table>

Legal assistant internship is a requirement for students who do not have the law-related work experience equivalent. Proficiency in utilization of a microcomputer is also a graduation requirement. Work experience in a law office may be validated to satisfy the internship requirement. Computer skills may be validated to
satisfy the computer requirement. Academic credit will not be granted where these requirements are met by validation.

C. Professional Electives

- Business courses numbered 700 to 799 are structured primarily for graduate students, but undergraduate, upper-division students may be admitted if they meet course prerequisites.

- Graduate students may not take these courses unless they have been admitted to the Graduate School. (See the Academic Information section of the Catalog for special conditions under which seniors may be admitted to graduate courses.)

Business Administration—General

Lower-Division Courses

190. Selected Topics. (1-3). Repeatable with departmental consent.

190A. The Right Start: Becoming a Master Student. (3). Specifi cal for first-year business majors. Helps students become master students. Provides an extended exposure to the mission, strategies, and programs of the Barton School of Business. Helps students prepare for success in studying, working with other students, interacting with faculty, and planning their career. Students learn current business practices and interact with representatives of the business community. Non-business students may enroll on a space-available basis. Counts as a business elective for any student enrolled in the Barton School of Business.

290. Selected Topics. (1-3). Repeatable with departmental consent.

Upper-Division Course

490. Selected Topics. (1-3). Repeatable with departmental consent.

Executive Master of Business Administration

Graduate Studies in Business

Courses for Graduate Students Only

800. Statistical Analysis and Quantitative Methods for Decision Making. (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 nonparametric methods. Prerequisite: admission to EMBA program.

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.

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.

803. Economic Analysis for Managers. (3). Focuses on the behavior of the firm’s product and labor markets; the consequences of business, regulatory and tax policies; industry pricing; research and development strategies; transfer pricing; the effects of vertical and horizontal integration; leveraged buy-outs and principal-agent problems. Prerequisite: admission to Executive MBA program.

804. Operations Management. (2). 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.

805. Global Business and Competitiveness. (2). 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.


Accounting

School of Accountancy

Lower-Division Courses

190. Selected Topics. (1-3). Repeatable with departmental consent.

210. Financial Accounting. (3). The study of accounting as a means of communicating financial information about the activities of business enterprises. Emphasizes concepts and principles underlying the measurement of income and financial position and how this information may be used to evaluate the progress of a firm.


260. Introduction to Information Processing Systems for Business. (3). Introduces the use of information processing systems in solving business problems and meeting the information needs of the modern business environment. Includes word processing, spreadsheet
analysis and use, use of computerized data bases, and an introduction to the internet.

**Upper-Division Courses**


320. Accounting for Decision Making and Control. (3). The use of accounting information to assist management in planning, analyzing, and implementing processes for decision making and control. Focus is on operational control in contemporary business contexts. Prerequisites: junior standing, Math. 109 or 111, and Acct. 220 and 260.

390. Special Group Studies in Business. (1-3). Repeatable for credit with School of Accountancy consent.


430. Introduction to Federal Income Tax. (3). An overview of the federal tax law and those laws specifically applicable to individuals and sole proprietors. Also introduces tax research techniques. Prerequisites: Acct. 210; Math. 109 or 111; junior standing.

481. Cooperative Education. (1-2).

491. Independent Study in Accounting. (1-3). Individual study for Cr/NC only. Prerequisites: 2750 grade point average in accounting, junior standing and School of Accountancy consent.

**Courses for Graduate/Undergraduate Credit**

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: Acct. 220 and 260; Math. 109 or 111; senior standing.

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: Acct. 410 or equivalent; Math. 109 or 111; senior standing.

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: junior standing; Math. 109 or 111; Acct. 260 and 320.

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. Prerequisite: Acct. 430 or equivalent.

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: Acct. 260, 410, 560; Math. 109 or 111; senior standing.

690. Seminar in Selected Topics. (1-3). Repeatable for credit with School of Accountancy consent.

777. Review for Professional Examinations. (1-6). Prep students for professional certification examinations in accounting, including the CPA, CMA, and CIA examinations. Enrollment governs 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.

**Courses for Graduate Students Only**

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

800. Financial Accounting. (3). A study of the basic structure of accounting, income determination, asset valuation, liability, recognition, and accounting for ownership equity. Includes the interpretation and analysis of financial statements. Prerequisite: no previous credit in accounting or permission of the School of Accountancy.

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. Prerequisite: Acct. 800 or equivalent.

802. The Effect of Taxation on Management Decisions. (3). Introduces the basic tax concepts of income, deductions, and credits that will enable managers to (1) understand the tax consequences of their business decisions and (2) communicate effectively with tax professionals in structuring business transactions. Prerequisites: graduate standing and Acct. 800 or equivalent, or permission of the School of Accountancy.

815. Financial Accounting and Reporting: Contemporary Issues. (3). Uses the case method to examine and analyze the application of 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.

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.

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.

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. 430 (or equivalent), or permission of the School of Accountancy.

840. Advanced Principles of Auditing. (3). An advanced study of auditing emphasizing EDP auditing statistical sampling and ethics. Prerequisites: graduate standing and Acct. 510 and 640 (or equivalent), or permission of the School of Accountancy.

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.

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

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

899. Thesis Research. (1-3).

**Business Law**

**Department of Finance, Real Estate, and Decision Sciences**

**Lower-Division Courses**

130Q. Introduction to Law. (3). A basic introduction to law. Considers the nature and functions of law, the structure of the American legal system and legal processes and procedures. Also surveys the major areas of substantive law. Open to students with a general interest in law. Students interested in the Legal Assistant Program should enroll concurrently in Legal 230.

190. Selected Topics. (1-3). Repeatable with departmental consent.
Upper-Division Courses


431. Legal Environment of Business. (3). An introduction to the legal environment in which businesses operate. Considers the institutions and processes related to business law, and the major frameworks of private and public law, including contracts and commercial transactions, business organizations, business torts, crimes, and regulatory law. Addresses ethical and social responsibility considerations as an integral aspect of legal regulation. Prerequisite: junior standing.


436. 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.


481. Cooperative Education. (1-2).

491. Independent Study. (1-5). Offered Cr/NCR only. Closed to graduate credit. Prerequisites: junior standing and 2.750 GPA in business law.

492. Internship in Business Law. (1-3). Offered Cr/NCR only. Prerequisites: junior standing, 2.750 GPA in business law and departmental consent.

Courses for Graduate/Undergraduate Credit

690. Seminar in Selected Topics. (1-5). Repeatable with departmental consent. Prerequisite: junior standing.

750. Workshop in Business Law. (1-4). Prerequisite: junior standing.

Courses for Graduate Students Only

831. Legal Environment of Business. (3). An introduction to the legal environment within which the business system operates. Considers the functions of law in relation to the business system, the institutions and processes involved in the interaction between business, society, and government and the major frameworks of private and public law. Emphasizes the realm of public law from a managerial perspective, including the ethical and social responsibility aspects of business behavior.

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

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

Decision Sciences

Department of Finance, Real Estate, and Decision Sciences

Upper-Division Courses

350. Introduction to Production and Operations Management. (3). An overview of the concepts, tools, and techniques used in making managerial decisions related to the production or operations function of an organization. Topics include facility location and layout, forecasting, operations scheduling, quality control, inventory planning, and control work design and measurement. Prerequisites: Econ. 231 and Math 144, or equivalent, and junior standing.


481. Cooperative Education. (1-2).

491. Independent Study. (1-5). Offered Cr/NCR only. Closed to graduate credit. Prerequisites: junior standing and 2.750 GPA in decision sciences.

492. Internship in Decision Sciences. (1-3). Offered Cr/NCR only. Prerequisites: junior standing, 2.750 GPA in decision sciences and departmental consent.


Courses for Graduate/Undergraduate Credit

575. Decision Making Techniques. (3). An introduction to the quantitative techniques commonly used for managerial decision making and their application to problems in such areas as production, distribution, and finance. Includes linear, integer, goal and dynamic programming, transportation models, network models, queuing theory, and simulation. Prerequisite: DS 350.

651. Design of Operations Systems. (3). Gives an in-depth view of the long-term design aspects of operations systems. Includes process analysis and design, production control information systems, facilities planning, materials handling systems, job design, personnel planning and scheduling, and current issues. Prerequisite: DS 350.

652. Operations Planning Systems. (3). Gives an in-depth analysis of the short-term or operational aspects of goods- or service-producing systems. Includes forecasting methods, inventory control models, material requirements planning, aggregate planning and scheduling, and current issues. Prerequisite: DS 350.

690. Seminar in Selected Topics. (1-5). Repeatable with departmental consent. Prerequisite: junior standing.

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

Courses for Graduate Students Only

850. Production and Operations Management. (3). Concepts for planning and controlling the production of either goods or services. Topics include linear programming, scheduling, quality control, inventory models, and waiting-line models. Not open to students with credit in DS 350. Prerequisites: calculus and statistics.

871. Multivariate Statistical Methods. (3). A study of selected multivariate statistical methods used in support of modern decision making. Includes multivariate hypothesis testing, multiple regression, correlation, analysis of variance and covariance, and discriminant analysis. Prerequisite: Econ. 370 or Econ. 231.

872. Advanced Statistical Analysis. (3). Examines topics such as sample design, chi square, variance analysis and correlation, and regression analysis from conceptual and decision-making points of view. Prerequisite: DS 671.

874. Management Information Systems. (3). A study of the structure and the strategic organizational role of computer-based information systems in organizations. Covers transaction processing/accounting information systems, management reporting and executive information systems, decision support and expert systems, and workflow information systems. An information resource management perspective emphasizes issues of building an information architecture, data integration and administration, and managing risk in information systems development efforts.

875. Management Science. (3). Provides quantitative bases from which the student may develop analytical abilities for use as a decision maker. Areas of study include mathematical programming, game theory forecasting, queuing theory, and simulation. Prerequisite: calculus.

876. Advanced Management Science. (3). An in-depth examination of selected management science models. Includes advanced inventory and quality control topics, goal programming, and other current decision making techniques. Prerequisite: DS 875 or departmental consent.

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, ensuring database integrity, database conversion, database administration, and data management for computer integrated
manufacturing. Prerequisite: DS 874 or instructor's consent.

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

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

893. Special Project in Decision Sciences. (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 candidates.


Economics

Department of Economics

Courses in the economics department are offered in the following subject areas. Since course descriptions are listed in numerical sequence, the following summary is presented to assist in locating courses by subject area.

General studies—Econ. 101G
Economic principles and theory—Econ. 102Q, 201Q, 202Q, 204H, 301, 302, 304, 605, 800, 801, 802, 804
Industrial organization and regulated industries—Econ. 614, 615, 617, 814
History and comparative systems—Econ. 622, 625, 627
Statistics and econometrics—Econ. 231, 702, 731, 803, 831
Monetary and financial economics; money and banking—Econ. 340, 740, 840, 847
Public finance—Econ. 765, 853, 865
Labor and manpower economics—Econ. 660, 661, 662, 663, 861
Economic growth and development; international economics—Econ. 671, 672, 674, 870
Urban, environmental and regional economics—Econ. 688, 885
Directed study; thesis—Econ. 491, 692, 750, 891, 892, 896.

Lower-Division Courses

101G. The American Economy. (3). An examination of the basic economic forces that affect the American economy today, the historical evolution of these forces and public policy issues resulting from these forces. Not open to upper-division students in the Barton School of Business. Not a substitute for Econ. 201Q and/or Econ. 202Q.

102Q. Consumer Economics. (3). An examination of the consumer's role in the economy. Includes the study of market organization and its impact on consumers, a discussion of information sources for consumers, and an analysis of the programs for consumer protection. Not open to upper-division students in the Barton School of Business.


>202Q. Principles of Micro-Economics. (3). General education further studies course. An introduction to price and distribution analysis. Also includes market structure and performance, contemporary issues, and public policy. Prerequisite: Econ. 201Q.

204H. The Economics of Public Issues. (3). A seminar on selected topics of current interest in economics that analyzes major economic problems of the day as a guide to making public policy decisions. Included are the economics of efficiency functions, nonparametric methods, legal, goods, social costs and their effects in the market system; related problems such as urban development and economic growth, inflation, unemployment, concentration of economic power, depletion of resources, pollution and conservation. Open only to honors students. Prerequisite: Econ. 203H.

231. Introductory Business Statistics. (4). An introduction to statistical inference, estimation and hypothesis testing. Includes measures of location and dispersion, probability, sampling distributions, discrete and continuous probability distributions, functions, elements of Bayesian decision theory, linear regression and correlation and time series analysis. Prerequisite: Math. 109, 111 or 112.

>250. Entrepreneurship and Personal Enterprise. (3). General education issues and perspectives course. Demonstrates that the ascribed attributes and personal qualities that traditionally have characterized the entrepreneur (initiative, investment, innovation, commitment, and risk-taking) can be learned by anyone who seeks personal intellectual fulfillment and/or business success. Knowledge of entrepreneurial principles and processes are invaluable in any academic discipline as well as for those in quest of desired career goals.


Upper-Division Courses

301. Intermediate Macroeconomics. (3). Introduces the concepts of aggregate demand and aggregate supply. After developing theoretical foundations for these, policy applications are discussed, including such policy issues as unemployment, inflation, government and international trade deficits and interest rates. Prerequisites: Econ. 201Q, 202Q and junior standing.

302. Intermediate Microeconomics. (3). Theory of resource allocation by means of prices and markets. Economic choice, production, cost, supply, demand and market structure are discussed, as well as efficiency conditions in consumption, production, distribution and exchange. Prerequisites: Econ. 201Q, 202Q and junior standing.

303. Managerial Economics. (3). Applies microeconomic theory to the solution of business problems. Prerequisites: Econ. 202Q and junior standing.

304. Money and Banking. (3). A study of money, credit, inflation and the structure and role of the commercial banking and Federal Reserve systems. Includes the relationship between banks and other financial institutions and the role of money in determining the level of economic activity and prices. Prerequisites: Econ. 201Q and junior standing.

481. Cooperative Education. (1-2).

491. Directed Study. (1-3). Individual study of various aspects and problems of economics. Repeatable for credit. Credit only. Prerequisites: junior standing, departmental consent, and 2.750 GPA in economics.

Courses for Graduate/Undergraduate Credit

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: Econ. 201Q, 202Q, or 890, and junior standing.

614. Industrial Organization. (3). A study of both competitive and noncompetitive market structures, conduct, and performance, with special emphasis on related public policy, such as antitrust. Prerequisites: Econ. 202Q and junior standing.

615. Economics of Transportation. (3). A study of economic characteristics of transportation modes, problems, and policies. Prerequisites: Econ. 201Q, 202Q, or 800, and junior standing.

617. Economics of Regulation. (3). A study of the theory and practice of regulation. Includes both the traditional regular of public utilities and communications and the newer forms of regulation, such as safety and environmental regulations. Prerequisites: Econ. 201Q, 202Q, or 800, and junior standing.


625. Economic History of Europe. (3). Cross-listed as Hist. 614. An analysis of the development of economic institutions; the rise of capitalism and its influence on overseas expansion, technology, precious metals, politics and war; changes in economic ideologies, and cultural effects of economic change. Prerequisites: Econ. 201Q and junior standing.

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. 201Q and junior standing.

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: Econ. 201Q, 202Q, or 800, and junior standing.

661. Collective Bargaining and Wage Determination. (3). An examination of economic and legal aspects of collective bargaining, emphasizing the techniques and procedures used and the major issues and problems inherent in the bargaining process. Explores the manner in which wages are determined under various institutional relationships. Prerequisites: Econ. 201Q, 202Q, or 800, and junior standing.

662. Work and Pay. (3). Investigation of the economic aspects of work and the workplace. Deals with the demographics of the labor force, methods of rewarding workers, and the quality of work life, worker alienation, and the nature of work under capitalism. Prerequisites: Econ. 201Q, 202Q, or 800, and junior standing.

663. Economic Insecurity. (3). Cross-listed as Ger 663. Personal economic insecurity, such as unemployment, old age, health care, disability, and erratic economic fluctuations. Includes costs and benefits of government aid to aid in meeting such insecurities. Prerequisites: Econ. 201Q, 202Q, or 800, or instructor’s consent; junior standing.

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 demographic topics within this framework. Prerequisite: Econ. 201Q, 202Q, or 800, and junior standing.

672. Introduction to International Economics and Business. (3). Cross-listed as Mgmt. 561. A survey of the economic foundations of international trade and investment. Studies international trade theory and policy (the international economy), then explores the operations of the multinational firm within that environment. Prerequisites: Econ. 201Q, 202Q, or 800, and junior standing.

674. International Finance. (3). Cross-listed as Fin. 625. The study of foreign exchange, balance of payments, the international monetary system and the world’s money and capital markets and their relationships with the financial operations of multinational firms. Also explores relevant aspects of international financial management through a series of case studies. Prerequisites: Fin. 340, Econ. 201Q, 202Q, or 800, and junior standing.

680. Economics of Energy and Natural Resources. (3). A study of the business and economic aspects of energy and natural resources problems. Includes energy demand and supply, the price of energy, energy industry characteristics and government regulations, conservation, environmental problems, and public policies. Uses statistical data extensively to evaluate the past and present energy and natural resources situations and trends for the future. Emphasizes simple economic concepts and theories to interpret the facts and to assess the impact of various public policies on the use of energy and natural resources. Prerequisites: Econ. 201Q, 202Q, or 800, and junior standing.

688. Urban Economics. (3). Cross-listed as P. Adm. 688. A survey of the economic structure and 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. 201Q and 202Q, or Econ. 800, and junior standing.

692. Group Studies in Economics. (1-3). Repeatable for credit with departmental consent. Prerequisite: junior standing.

702. Mathematical Methods in Economics. (3). Introduces mathematical tools that are especially useful in economics, econometrics, and finance. Includes a review of differential and integral calculus, an introduction to linear algebra, and the application of mathematical methods to economic problems. Prerequisites: Econ. 201Q, 202Q, or 800, and junior standing.


740. Monetary Problems and Policy. (3). An examination of historical and contemporary monetary issues in the context of the global economy. Prerequisites: Econ. 201Q, 202Q, or 800, and junior standing.

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

765. Public Sector Economics. (3). Cross-listed as P. Adm. 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. 201Q, 202Q, or 800, and junior standing, or instructor’s consent.

Courses for Graduate Students Only

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.

801. Macroeconomic Analysis. (3). An intensive analysis of contemporary literature and problems of national income analysis. Prerequisite: Econ. 301. Prerequisite or corequisite: Econ. 702 or equivalent.

802. Microeconomic Analysis. (3). An intensive analysis of contemporary literature and problems in the areas of production, pricing, and distribution. Prerequisites: Econ. 302 or 804 or equivalent, Econ. 702.

803. Analysis of Business Conditions and Forecasting. (3). An intensive study of research methodology and forecasting for real-world 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.

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, and one course in calculus.


831. Introduction to Econometrics. (3). Analysis of time series, multiple regression, multiple correlation, and the use of econometric models and ideas. Prerequisites: Econ. 731 or 702 or equivalent.


847. Speculative Markets. (3). Cross-listed as Fin. 822. 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: Econ. 840 or equivalent.

853. Seminar in Public Finance. (3). An analysis of the theoretical and applied aspects of public finance in the American and foreign economies. Explores selected topics of current and permanent importance. Repeatable for credit with departmental consent. Prerequisite: Econ. 201Q, 202Q, or 800.

861. Seminar in Contemporary Labor Issues. (3). An intensive analysis of contemporary problems in the field of labor. The specific nature of the problems is determined by the interest of those enrolled in the course. Repeatable for credit with departmental consent. Prerequisite: instructor’s consent.

865. State and Local Government Finance. (3). Cross-listed as Pol. S. 865 and P. Adm. 865. An analysis of state and local government expenditures and revenue systems, with an introduction to state and local financial administration. Prerequisites: Econ. 765 or instructor’s consent.

870. Seminar in International Trade. (3). Cross-listed as Fin. 820. A seminar in theoretical concepts and contemporary issues of international economics and finance. Includes foreign exchange markets, the Eurodollar market, Arab oil dollars in the international monetary system, transfers of inflation between countries, developments in
the common markets, etc. Prerequisites: Econ. 201 and 202.

885. Seminar in Environmental Quality Control. (3). Examination of actual problems, projects, and/or current approaches to environmental quality control. Takes a critical look at current happenings and trends. Prerequisite: instructor's consent.

891. Directed Study. (1-9). Individual study of various aspects and problems of economics. Repeatable for credit with departmental consent. Prerequisites: graduate standing and departmental consent.


896. Thesis. (1-9).

Entrepreneurship

Department of Marketing and Entrepreneurship

Lower-Division Courses

160Q. Introduction to Entrepreneurship. (3). An introductory course designed not only to familiarize the student with the world of small business but also to analyze the personal strengths and weaknesses as they relate to launching an entrepreneurial career. Considerable attention is given to the elementary concepts of planning, financing, starting, and managing a new business.

250. Entrepreneurship and Personal Enterprise. (3). Demonstrates that the ascribed attributes and personal qualities that traditionally have characterized the entrepreneur (initiative, investment, innovation, commitment, and risk-taking) can be learned by anyone who seeks personal intellectual fulfillment and/or business success. Knowledge of entrepreneurial principles and processes is invaluable in any academic discipline as well as for those in quest of desired career goals.

Upper-Division Courses

320. Principles of Entrepreneurship. (3). A fundamentals course which provides a broad overview of the entrepreneurial discipline. Includes entrepreneurial history, the theoretical foundations, principles of venture creation, development, management, and final exit/harvesting of the firm. The start-up process includes pre-start-up research, determination of ownership, and final preparation before the opening and initial launch of the business. Individual processes explored include entrepreneurial mentality and attitudes and organizational behaviors such as managing innovation, change, and growth in a rapidly growing firm. Includes women and minority entrepreneur issues, international entrepreneurship, TQM, and family business issues. Prerequisites: junior standing.

420. Developing a New Venture Marketing Plan. (3). Emphasizes the tools used in the identification of opportunity and subsequent development of the business concept by either starting one's own business or by purchasing an existing business or a franchise. The business will be researched and developed to the point of launching the new venture. Develops a marketing plan that positions the venture to achieve a competitive advantage in the market place. Includes both primary and secondary research to estimate market potential, competitiveness in a given geographical market place, analysis of industry trends, and environmental threats and opportunities. The analysis results in the creative strategy and tactics for the venture's launch. Prerequisites: Entrep. 320 and Mkt. 300.

481. Cooperative Education. (1-2).

491. Independent Study in Entrepreneurship. (1-5). Offered Cr/NCr only. Closed to graduate credit. Prerequisites: junior standing and 2.750 GPA in entrepreneurship courses.

492. Internship in Entrepreneurship. (1-3). Offered Cr/NCr only. Prerequisites: junior standing, 2.750 GPA in entrepreneurship, and departmental consent.

Courses for Graduate/Undergraduate Credit

606. New Product Marketing. (3). Cross-listed as Mkt. 606. Addresses identifying, evaluating, developing, and commercializing new products within both smaller and larger firms. Explores the role of the product/brand manager, a person who often acts as an internal entrepreneur. Prerequisites: Mkt. 300 and junior standing.

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 and junior standing.


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: Mkt. 500 or Mkt. 300, and Mgmt. 360.

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, proforma development of financial statements and the capitalization of the firm. Explains and illustrates strategies for exiting and harvesting the business. Prerequisites: Entrep. 320 or Mkt. 301, Mkt. 300, 250, 330, Mgmt. 360, and senior standing.

690. Special Topics in Entrepreneurship. (3). Advanced course with in-depth discussion of emerging topics within the field of entrepreneurship. Topics rotate, allowing the student to repeat the class one time. Prerequisites: Entrep. 668 and 420 and senior standing.

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

Courses for Graduate Students Only

812. Introduction to Total Quality Management. (3). Cross-listed as Mkt. 812 and 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. Prerequisite: instructor's consent.

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 analyses; (3) pro forma development; (4) feasibility decision making; and (5) actual preparation of the loan package. Prerequisites: Acct. 800 or its equivalent, or approval of the instructor. Not open to students with credit in Entrep. 668.

869. Entrepreneurship and Innovation Within Organizations. (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) "intrapreneurship"—the need for it, definition, methods, favorable environment, and rewards; (6) examples of intrapreneurship; (7) entrepreneurial strategies, policies, and practices for organizations; and (8) the entrepreneurial society, a growing way of life. Prerequisites: open to all students fully admitted to graduate programs in the Barton School of Business and instructor's approval.

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

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


Finance

Department of Finance, Real Estate, and Decision Sciences

Lower-Division Courses

140Q. Personal Finance. (3). Management of the cash flows experienced by individuals and families. Analysis of alternative strategies to
meet individual financial goals through various investment media. Examining risks and returns. Exposes student to a set of tools that can be applied in personal financial management to provide a flexible and relevant framework for future decision making.

190. Selected Topics. (1-3). Repeatable with departmental consent.

Upper-Division Courses

330. Introduction to Insurance. (3). A basic study of both property/casualty and life/health insurance. Analysis of risk and the ways to treat both personal and business losses exposures. Study of the contracts, rate making, and services of the insurance business as well as the marketing and regulation of both private and governmental insurance. Prerequisite: junior standing.


432. Contemporary Issues in Banking. (3). A survey of contemporary issues facing the U.S. commercial banking system. Content varies according to the timeliness of various issues. Not only for those planning a career in banking but for anyone interested in current trends and issues in banking. Prerequisite: Fin. 340.

440. Financial Management II. (3). A study of long-term financing decisions and financial planning. Also includes working capital management, mergers and acquisitions, and international financial management. Prerequisites: Fin. 340.

481. Cooperative Education. (1-2).

491. Independent Study. (1-6). Offered Cr/NCr only. Closed to graduate credit. Prerequisites: junior standing and 2,750 GPA in finance.

492. Internship in Finance. (1-3). Offered Cr/NCr only. Prerequisites: junior standing, 2,750 GPA in finance and departmental consent.

Courses for Graduate/Undergraduate Credit


612. Capital Budgeting. (3). A study of the planning and control of capital expenditures. Explores the use of various decision rules for making accept/reject decisions on projects. Includes the study of project cash flows and analysis, mutually exclusive projects, and the choice of the discount rate. Prerequisite: Fin. 340 and junior standing.


621. Security Analysis and Portfolio Management. (3). Comprehensive study of methods of analyzing major types of securities, including behavior analysis. Explores the formulation of investment objectives, the design of portfolios for corporate and individual investors and portfolio theory. Prerequisites: Fin. 340 and junior standing.

622. Futures and Options Markets. (3). Presents an overview of the futures and options markets. Discusses the practical concepts as well as the practice issues of hedging and speculating in these markets. Prerequisites: Fin. 340 and junior standing.

625. International Financial Management. (3). Cross-listed as Econ. 674. The study of foreign exchange, balance of payments, the international monetary system, and the world's money and capital markets and their relationships with the financial operations of multinational firms. Also explores relevant aspects of international financial management through a series of case studies. Prerequisites: Fin. 340, Econ. 202Q, and junior standing.

630. Financial Institutions. (3). A study of the management, structure, regulation, and operations of banks in the financial services industry and the markets in which they operate. Includes in-depth analysis of commercial banks, savings and loans, credit unions, mutual funds, insurance companies, investment companies, and other financial institutions. Prerequisite: Fin. 340 and junior standing.

631. Money and Capital Markets. (3). A study of domestic and international capital markets, instruments, and institutions and the determinants of the general level and structure of interest rates and security prices. Also covers management of interest rates and portfolio risk using a variety of techniques. Prerequisites: Fin. 340 and junior standing.

632. Commercial Bank Management. (3). A study of bank asset and liability management. Also explores the internal organization of commercial banks, current problems and recent innovations in commercial banking. Prerequisites: Fin. 340 and junior standing.

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, six hours of accounting, or departmental consent, and junior standing.

690. Seminar in Selected Topics. (1-6). Repeatable with departmental consent. Prerequisites: Fin. 340 and junior standing.

750. Workshop in Finance. (1-4). Prerequisites: Fin. 340 and junior standing.

Courses for Graduate Students Only


812. Capital Budgeting. (3). A study of the organization and operation of the capital budgeting system. Explores problems in partial diversification and capital security costs of funds flows. Includes contemporary methods of treating uncertainties and constraints and the application of programming techniques. Also explains the determination of appropriate discount rates. Prerequisite: Fin. 840 or equivalent.

820. Seminar in International Trade and Finance. (3). Cross-listed as Econ. 870. A seminar in theoretical concepts and contemporary selected issues of international economics and finance. Includes foreign exchange markets, the Eurodollar markets, Arab oil dollars in the international monetary system, transference of inflation between countries, developments in the common markets. Prerequisite: Fin. 625 or Econ. 674 or instructor's consent.


822. 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.

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

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

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.
Human Resource Management
Department of Management

Lower-Division Course

190. Selected Topics. (1-3). Repeatable with departmental consent.

Upper-Division Courses

390. Special Project in Finance. (1-4). A special project including original research supervised by a faculty member. Prerequisite: approval of the MS committee. Open only to MS in business degree candidates. Prerequisite: Fin. 840.

491. Independent Education. (1-2).

492. Internship in Personnel. (1-3). Offered Cr/Nr only. Prerequisites: junior standing and 2.750 GPA in HRM courses.

Courses for Graduate/Undergraduate Credit

664. Labor Relations. (3). Presents the philosophy underlying labor legislation and the function of collective bargaining in labor-management relationships. Prerequisite: junior standing.

666. Human Resource Selection. (3). Analysis of all phases of the election 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 an environmental analysis, recruiting, job analysis, and selection techniques, including testing and interviewing, also validation of selection techniques. Prerequisite: HRM 466 or instructor's consent.

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. Prerequisite: HRM 466 or instructor's consent.

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

705. Workshop in Human Resources. (1-4). Prerequisite: junior standing.

International Business
Department of Management

Upper-Division Courses

390C. International Purchasing. (1-3). Cross-listed as DS 390C. Repeatable with departmental consent.

491. International Business Independent Study. (1-5). Offered Cr/Nr only. Prerequisites: junior standing and 2.750 GPA.

492. International Business Internship. (1-3). Offered Cr/Nr only. Prerequisites: junior standing, 2.750 GPA.

Courses for Graduate/Undergraduate Credit

600. International Management. (3). Studies management concepts and practices applicable to business operations in an international setting. Examines a wide range of problems associated with business operations across national boundaries. Discusses cultural differences, language barriers, nationalism, protectionism, technology transfer, and trade policies. Prerequisites: Mgmt. 360 or concurrent enrollment and junior standing.

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 and junior standing.

Legal Assistant
Department of Finance, Real Estate, and Decision Sciences

Lower-Division Courses

230. Introduction to Paralegalism. (2). The new role concept of the legal assistant in the practice of law. An inquiry into what paralegals do, types of paralegal employment, education and license, professional ethics, authorized and unauthorized practice of law, and an introduction to paralegal skills. Prerequisite: B. Law 130Q, concurrent enrollment or departmental consent.

231A. Legal Research and Writing I. (3). An introduction to the tools and techniques of legal research, emphasizing the basic analytical skills. Introduces the student to the components of a law library through a variety of assigned problems, some of which culminate in the writing of a research memorandum or brief. Prerequisite: admission to the Legal Assistant Program or departmental consent.

232. Legal Aspects of Business Organizations. (3). The law of business organizations emphasizing the practice aspects related to formation of operation of partnerships, corporations and businesses. Includes drafting aspects related to employment agreements, partnership agreements, and corporate documents. Prerequisite: admission to the Legal Assistant Program or departmental consent.

233. Litigation. (3). An introduction to the civil litigation process emphasizing the practice aspects associated with a civil action. Includes civil procedure, preparation and use of pleadings, discovery, law of evidence and appeals. Prerequisite: admission to the Legal Assistant Program or departmental consent.

234. Estate Administration. (3). The law of intestate succession, wills, and trusts, emphasizing the administration of an estate under Kansas law. Includes the preparation of a will, trust instruments, and documents related to the probate process. Prerequisite: admission to the Legal Assistant Program or departmental consent.

235. Law Office Management and Technology. (3). The application of modern concepts of organization, management, and systems technology to the law office. Emphasizes the use of systems approaches and the proper use of nonlawyers in the handling of all administrative functions and routine legal matters. Prerequisite: admission to the Legal Assistant Program or departmental consent.

236. Legal Practice. (3). A continuation of Legal Practice I. Emphasizes the functions of a legal
assistant in trial preparation and execution including gathering and organization of materials, investigating, interviewing, drafting of pleadings and interrogatories, preparing a trial notebook, assisting during trial, etc. Prerequisites: admission to the Legal Assistant Program or departmental consent and Legal 233.

237. Family Law. (3). An introduction to family law including the role of a lawyer as counselor. Emphasizes the practice aspects related to divorce, separation, custody, support, adoption, and guardianship matters. Prerequisite: admission to the Legal Assistant Program or departmental consent.

238. Legal Assistant Internship. (2). Internship training in a law office, corporate law department, or government agency. Offered Cr/NC only. Prerequisites: 12 hours of legal specialty courses and internship committee approval.

239. Special Topics. (1-3). Repeatable with departmental consent. Prerequisite: admission to the Legal Assistant Program or departmental consent.

240. Substantive Law: Torts. (3). An introduction to the substantive law which is involved in personal injury litigation. Special emphasis on analysis of cases and applying legal principles to facts. Prerequisite: admission to the Legal Assistant Program or departmental consent.

241. Legal Research and Writing II. (3). A continuation of Legal 231A. Covers research in specialized legal materials and writing of trial and appellate briefs. Prerequisites: admission to the Legal Assistant Program or departmental consent and Legal 231A.

243. Property Law. (3). An introduction to the principles of property law emphasizing the practice aspects of real estate transactions. Prerequisite: admission to the Legal Assistant Program or departmental consent.

244. Legal Assistant Computer Skills. (3). An introduction to the utilitarian use of microcomputers by legal assistants. Emphasizes word processing, litigation support, and computer-aided research with Lexis or Westlaw. Prerequisite: Legal 231A or 233 or departmental consent.

Management
Department of Management

Lower-Division Courses

101G. Introduction to Business. (3). Everyone spends a lifetime dealing with and being influenced by business firms. Introduces students to current issues, concepts, and functions of business and its environment.

190. Selected Topics. (1-3). Repeatable with departmental consent.

Upper-Division Courses

360. Management and Organizational Behavior. (3). An overview of concepts, theories, and practices that apply to the management of work organizations. Includes organizational goals, corporate strategy, structure, decision making, leadership, motivation, communication, group dynamics, organizational change, and the international dimension of business. Prerequisite: junior standing.

362. Managing People in Organizations. (3). Studies why individuals behave the way they do in organizations. Discusses concepts such as personality, motivation, job design, conflict, leadership, and organizational dynamics, emphasizing developing skills to manage behavior for maximum organizational effectiveness. Prerequisite: junior standing.


462. Leading and Motivating. (3). A study of theories of human motivation and adaptation of these theories to programs in organizations. Studies the use of teams to accomplish work-related tasks. Prerequisites: Mgmt 360 or concurrent enrollment and junior standing.

464. Communicating Effectively in Organizations. (3). An examination of the design of organizational communication systems. Includes an introduction to communication models and analysis of the interpersonal communication process. Prerequisite: Mgmt 360 or concurrent enrollment and junior standing.

481. Cooperative Education. (1-2).

491. Independent Study. (1-5). Offered Cr/NC only. Closed to graduate credit. Prerequisites: junior standing and 2.750 GPA in management.

492. Internship in Management. (1-3). Offered Cr/NC only. Prerequisites: junior standing, 2.750 GPA in management, and departmental consent.

Courses for Graduate/Undergraduate Credit

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

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 effective-ness of individuals, work groups, and the organization as a whole. Prerequisites: Mgmt 360 or concurrent enrollment and junior standing.

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 or concurrent enrollment and junior standing.

662. Managing Workplace Diversity. (3). Modern organizations face the challenge of managing employees with diverse backgrounds and talents to provide products and services in a diverse world. 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 or concurrent enrollment and junior standing.

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 or concurrent enrollment and junior standing.

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 or concurrent enrollment and junior standing.

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

690. Seminar in Selected Topics. (1-5). Repeatable with departmental consent. Prerequisite: junior standing.

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

Courses for Graduate Students Only

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.

812. Introduction to Total Quality Management. (3). Cross-listed as Entre. 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. Prerequisite: instructor's consent.

836. International Business Administration. (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.

860. Management of Organizations. (3). An introduction to management and organizational theory. Includes classical and contemporary management theory, human relations, group dynamics, motivation, communication, organizational structure and design, and behavioral control.

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: Mgmt. 860 or departmental consent.

869. Research in Behavioral Science. (3). An analysis of some of the concepts and tools in behavioral science relevant to research in organizations. One or two areas such as motivation, cognitive processes, attitudes, and values, etc., may be analyzed in depth. Prerequisite: Mgmt. 862 or departmental consent.

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. Focuses on the development of a firm's strategy. Prerequisites: to be taken during the last semester of student's program, or departmental consent.

889. Seminar in Research Methodology. (3). A study of concepts and procedures in the design and performance of research.

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

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

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
Department of Finance, Real Estate, and Decision Sciences

Lower-Division Course

200. Fundamentals of Programming and Programming Languages. (3). Introduces computer programming concepts, structured programming techniques, and programming languages. Starts with an overview of computer architecture and introduces computer programming in machine language, assembly language, third generation languages (BASIC, Pascal, C), and fourth generation languages (Visual BASIC, DELPHI). Programming projects emphasize modification (maintenance) of existing business application programs. Prerequisite: Acct. 260 or CS 150.

250. Fundamentals of Data Structures, File Design, and Access. (3). Introduces data structuring concepts necessary for building business applications systems. Utilizes file design and access applications as the vehicle to teach traditional concepts of in-memory data structures. Programming projects employ third generation languages, including COBOL, as well as fourth generation languages. Studies computer file organizations ranging from sequential to indexed sequential. Prerequisite: MIS 200.

Upper-Division Course

300. Data Communications and Computer Networks. (3). Takes a problem-solving approach to introducing data communications and computer networking concepts. Technical and managerial issues in providing video conferencing, Electronic Data Interchange (EDI), setting a bulletin board system, a world wide web site, a local area network (LAN), remote access to a LAN, and Internet-working LANs over a wide area network provide the backdrop for introducing communication concepts (OSI), standards (X.400, SNMP), protocols (TCP/IP), and telecommunications (ATM). Prerequisite: MIS 250.

350. Systems Analysis and Design. (3). Introduces various methodologies for systems analysis, design, and implementation. Examines application development in the context of the overall MIS Management 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 system engineering, software project management, and system documentation. Prerequisite: MIS 300.

Courses for Graduate/Undergraduate Credit

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. Prerequisite: MIS 350.

650. Problem Solving, Decision Support, and Expert Systems. (3). Introduces the design and implementation of decision support systems (DSS). Emphasizes problem solving and decision modeling techniques pertinent to representational problems in different business functional areas including accounting, finance, human resources, management, marketing, and production. Students utilize various end user tools, including 4GLs, spreadsheets, statistical software, DSS generators, expert system shells, and EIS software to undertake several DSS implementation projects. Prerequisite: MIS 600.

696. Management of the IS function. (3). Addresses the issues of managing the information systems (IS) function. Includes the role of IS as a corporate entity, organizing the IS department, IS personnel management, IS project management, and the role of IS as a user support entity. Prerequisite: MIS 650.

Marketing
Department of Marketing and Entrepreneurship

Lower-Division Course

190. Selected Topics. (1-3). Repeatable with departmental consent.

Upper-Division Courses

300. Marketing. (3). A description and analysis of the U.S. marketing system and an investigation of the factors affecting management of the major policy areas of marketing in the firm. Prerequisite: junior standing.


403. Marketing Research. (3). A study of the design of marketing information systems and marketing research procedures. Prerequisites: Mkt. 300, Econ. 231, and junior standing.

404. Retail Management. (3). An examination of the essential principles and practices of retail business management, including site selection, store design and department layout, merchandise management, sales promotion, and customer services. Also considers the broad issues of modern marketing and financial strategies as they affect retail distribution and clarifies new influences at work in the
retailing environment. Prerequisite: Mkt. 300 or departmental consent.

405. Consumer Behavior. (3). A study of a variety of concepts in the behavioral sciences related to specific topics in consumer behavior, including mass communications, reference groups and sociological, psychological, and economic aspects of consumer behavior. Prerequisite: Mkt. 300 and junior standing.

407. Marketing for Service and Nonprofit Organizations. (3). A study of the unique marketing challenges faced by service and nonprofit organizations. Evaluates marketing concepts and appropriate marketing programs from the perspective of these organizations. Prerequisite: Mkt. 300 and junior standing.

481. Cooperative Education. (1-2).

491. Independent Study. (1-5). Offered for Cr/NCr only. Closed to graduate credit. Prerequisite: junior standing and 2.750 GPA in marketing.

492. Internship in Marketing. (1-3). Offered for Cr/NCr only. Prerequisite: junior standing, 2.750 GPA in marketing, and departmental consent.

Courses for Graduate/Undergraduate Credit

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 and junior standing.

604. Distribution Management. (3). A study of all areas involved with the distribution of a firm's products or services. Focuses on such issues as the development of a firm's marketing channels and its relationships with wholesalers and retailers as well as the management of the firm's storage facilities, inventory control, procedures, and shipping facilities. Prerequisites: Mkt. 300 and junior standing.

606. New Product Marketing. (3). Cross-listed as Entre. 606. Addresses identifying, evaluating, developing, and commercializing new products within both smaller and larger firms. Explores the role of the product/brand manager, a person who often acts as an internal entrepreneur. Prerequisite: Mkt. 300.

607. Promotion Management. (3). An analysis of all issues involved with the promotion of an organization and its products or services. Deals with the development of advertising campaigns, management of the personal sales force, development of special promotional activities, and management of public relations. Prerequisites: Mkt. 300 and junior standing.

608. Selling and Sales Force Management. (3). Cross-listed as Entre. 608. Analysis of current behavioral concepts of personal selling and the problems and policies involved in managing a sales force. Prerequisites: Mkt. 300 and junior standing.

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 and six additional hours of marketing.

690. Seminar in Selected Topics. (1-5). Repeatable with departmental consent. Prerequisite: junior standing.

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

Courses for Graduate Students Only

800. Marketing Systems. (3). An intensive analytical introduction to the combination of institutions that comprise the overall marketing system. Also presents the marketing function as a major subsystem within the individual business firm.

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.

802. Marketing Strategy. (3). Integration of long-range marketing and corporate policies. Includes budgetary control and the evaluation of the effectiveness of marketing systems. Also probes the organization of the marketing department and its relation to the total organization. Prerequisite: Mkt. 800 or departmental consent.

803. Marketing Analysis. (3). The application of the scientific method to the solution of marketing problems. Prerequisite: Mkt. 800 or equivalent.

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: Mkt. 800 or departmental consent.

807. Services and Nonprofit Marketing. (3). Examines the characteristics of commercial and nonprofit services that pose unique marketing challenges for these types of organizations. Prerequisite: Mkt. 800 or equivalent.

812. Introduction to Total Quality Management. (3). Cross-listed as Entre. 812 and 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.

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

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

893. Special Project in Marketing. (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.


Real Estate

Department of Finance, Real Estate, and Decision Sciences

Lower-Division Course

190. Selected Topics. (1-3). Repeatable with departmental consent.

Upper-Division Courses

310. Principles of Real Estate. (3). Economic, legal, and physical characteristics of real estate. Overview of real estate, including contracts, deeds, title assurance, market analysis, appraisal, brokerage, mortgage financing, investment, and property management principles. Prerequisite: junior standing.

390. Special Group Studies in Real Estate. (1-3). Repeatable with departmental consent.

438. Real Estate Law. (3). Laws and regulations affecting real estate ownership and use, including ownership interests, conveyancing, mortgages, title assurance, landlord-tenant relationships, and public and private land-use controls. Prerequisite: junior standing.

481. Cooperative Education. (1-2).

491. Independent Study. (1-5). Offered for Cr/NCr only. Closed to graduate credit. Prerequisite: junior standing and 2.750 GPA in real estate courses.

492. Internship in Real Estate. (1-3). Offered for Cr/NCr only. Prerequisite: junior standing, 2.750 GPA in real estate, and departmental consent.

Courses for Graduate/Undergraduate Credit

611. Real Estate Finance. (3). Real estate financing institutions, institutions, traditional and creative financing techniques. Risk analysis, mortgage financing and underwriting, primary and secondary mortgage markets. Prerequisite: Fin. 340. RE majors should have completed RE 310.


618. Real Estate Investment Analysis. (3). Equity investor decision criteria, institutional and ownership entity investment constraints, financial leverage opportunities, cash flow analysis, and creative income tax strategies. Prerequisite: Fin. 340. RE majors should have completed RE 310.

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. Prerequisite: RE 310 or 611 or 618.

690. Seminar in Selected Topics. (1-5). Repeatable with departmental consent. Prerequisite: junior standing.
750. Workshop in Real Estate. (1-4). Prerequisite: junior standing.

Courses for Graduate Students Only

810. Real Estate Feasibility Analysis. (3). Theory and practice of analyzing the feasibility of both new construction and redevelopment of income-producing projects. Approaches detailed comprehensive case studies with contemporary analytical techniques. Prerequisites: RE 310, 614, and 618.

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

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

893. Special Project in Real Estate. (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.

College of Education

Jon Engelhardt, PhD, Dean

The primary purpose of the College of Education is to develop skilled and competent teachers, administrators, counselors, school psychologists, speech and language clinicians, and other specialists. College faculty also contribute to the improvement of education at local, state, and national levels through their teaching, research, and professional service.

Curricula listed in the following sections give students an opportunity for systematic study. These programs enable students to develop (1) an understanding of education's place in a democratic society, (2) a philosophy of education consistent with functioning in that society, and (3) a conceptual base to use in relating theory to practice, which includes knowledge of human growth and development and principles of human learning.

The College of Education is accredited by all appropriate agencies, including the Kansas State Board of Education, the National Council for the Accreditation of Teacher Education, the American Speech/Hearing Association, and the National Association of School Psychologists. The college recommends appropriate teacher's certificates be awarded to those who complete requirements established by the board.

The college also provides a non-teaching major in the area of health and physical education. Students may select one of two approved options: exercise science or sport administration. The option in exercise science prepares students to help people of all ages and abilities reach their fitness goals. The sport administration option allows students to take a combined curriculum in physical education and business.

Degrees Offered

Undergraduate

The College of Education offers programs leading to the bachelor's degree and/or to state teacher certification at the elementary and secondary levels. The State Board of Education regulates standards for all teaching certificates; curricula offered by the college are altered as needed to meet changes in these requirements.

The programs in health and physical education provide nonteaching routes to the bachelor's degree.

A student may obtain a second bachelor's degree in the College of Education. This requires (1) admission to the College of Education, (2) completion of a minimum of 30 credit hours in a program not required for the first bachelor's degree, and (3) completion of all the requirements for graduation from the College of Education.

Graduate

The College of Education offers a number of graduate programs. The Master of Arts (MA) and Doctor of Philosophy (PhD) degrees are offered in speech language pathology/audiology, and the Doctor of Education (EdD) degree is offered in educational administration. The program in school psychology leads to the Specialist in Education (EdS) degree. Master of Education (MED) programs are available in counseling, educational administration, educational psychology, curriculum and instruction, physical education, special education, and sport administration.

Graduate courses are offered to meet state requirements for certification or endorsement as audiologists, early childhood teachers, educational administrators, middle-level teachers, reading specialists, school counselors, school psychologists, special education teachers, and speech and language pathologists. English as a second language, bilingual/multicultural education, and supervisory personnel. Master's programs in curriculum and instruction and educational psychology also have been designed for teacher practitioners who wish to enhance their teaching skills. For specific graduate programs see the Wichita State University Graduate Bulletin.

Policies

Admission to the College of Education

Pre-program Students

Degree-bound students who select education as a major will enter the college as pre-program students. To remain in the pre-program category in the College of Education, a student must maintain at least a 2.000 grade point average. For more information on general University admission requirements, see the Admission to Wichita State section of the Catalog.

Full Admission

Students who request full admission to the College of Education must satisfy the following admission requirements:

1. Complete 24 credit hours with an overall grade point average (GPA) of at least 2.500.
2. The 24 hours must include Engl. 101 and 102, College English I and II, with a grade of C or above, Comm. 111, Public Speaking, with a grade of C or above, and Math. 111, College Algebra with a C or above, or their equivalents.

Any student denied admission to the college may appeal by filing a written petition with the Standards Committee of the College of Education.

Admission to Programs in Teacher Education

Students are advised on the basis of the program (check sheet) in effect when they are admitted to teacher education rather than the program (check sheet) in effect when they began their college or university work.

Admission to the College of Education does not mean that a student is accepted into one of the certification programs in teacher education. Students must satisfy the following requirements to be admitted as a candidate for a Kansas teacher's certificate:

1. Pass CI 271, with a grade of B or better, and 272, which involves
   (a) Competency tests in reading, writing, and mathematics
   (b) Beginning field experience requirements.
2. Complete 35 hours of general education courses with a minimum grade point average of 2.750 on the 35 hours.
3. Earn a grade of C or better in Engl. 101 and 102, College English I and II; Comm. 111, Public Speaking; and Math. 111, College Algebra.
4. Attain a minimum overall grade point average of 2.500.
5. Complete a second course in mathematics above College Algebra. Stat. 370 may be chosen in Division D of the General Education Program.

Enrollment Limits

Students enrolled in the College of Education may not enroll in more than 21 semester hours of work per semester during the academic year. Summer Session
enrollments are limited to a maximum of six hours for each four-week session or 12 hours during the Summer Session. Students who have completed at least 24 hours at WSU with a WSU grade point average of 3.00 or better may petition their department chairperson for permission to enroll in excess hours.

Probation and Dismissal
Pre-program Students
Pre-program students are required to maintain at least a 2.000 (C) average. Students are placed on academic probation whenever they have attempted six hours and their WSU grade point average falls below 2.000. The transition semester counts toward the number of hours attempted but does not count in the calculation of the grade point average used to assess probation or dismissal.

Transfer students admitted on probation must complete at least 12 semester hours of credit work and achieve a 2.000 grade point average on work at Wichita State before probation is removed.

Students on probation normally are limited to a maximum load of 12 hours per semester, although exceptions may be made by the Dean of the College of Education. The limitation of 12 hours also applies to students who have declared a transition semester.

All pre-program students who have accumulated 12 attempted credit hours after being placed on probation and who do not have a 2.000 grade point average for the most recent semester or Summer Session will be academically dismissed. Students who have been dismissed may seek readmission to the College of Education by appealing, in writing, for an exception to the regulations.

Full Admission Students
Students in the College of Education are placed on probation at the conclusion of any semester in which their overall WSU grade point average falls below 2.500. These students will be continued on probation if their grade point average for the semester on probation is at least 2.500. Students who fail to earn at least a 2.500 for any semester on probation may be dismissed for poor scholarship. Students on probation are limited to a maximum enrollment of 12 hours per semester.

Students may not be academically dismissed at the end of a semester unless they began that semester on academic probation. Also, students may not be academically dismissed from the College of Education before they have attempted a total of 12 semester hours at WSU after being placed on probation.

Students dismissed for poor scholarship may reenroll only with the special permission of the Standards Committee.

Students who have been dismissed for academic reasons may seek readmission to the College of Education by appealing in writing for an exception to the regulations. The College of Education requires petitioners to meet with an academic counselor and to prepare a written petition which is considered by the Standards Committee of the College of Education and then forwarded to the University's Committee on Admissions and Exceptions for final action.

Academic counseling and advanced planning require careful attention and time. Thus, students should secure their recent academic records, complete their petition, and have their readmissions counseling session at least five days before the first day of enrollment of the semester for which they wish to be readmitted.

Students develop their own cases for readmission. They should center their petitions around reasons for their failure and presentation of evidence for probable future success.

Cooperative Education
The College of Education is one of the participating colleges in the University Cooperative Education program. This program is designed to provide off-campus, paid, work experiences that integrate, complement, and enhance the student's regular academic program. Students are placed in a variety of educational experiences which range from early childhood through university settings. Participation in the program requires enrollment for credit in specific Cooperative Education courses designated by the appropriate academic department in the college. To enroll in the program or for more information, students should contact the Cooperative Education coordinator.

Professional Development School Opportunity
A Professional Development School (PDS), a collaboration between school and University faculty and staff, supports effective teaching practices, integration of intern and teacher learning with instructional programs, collegiality, inquiry, and dissemination of new knowledge. This design provides an environment which mixes the best of theory, research, and practice and provides an exciting alternative to the current teacher education program. In the PDS program, students spend 10 to 12 hours a week at one of the PDS complexes (either the elementary, middle school, or high school). The eight professional courses plus a portion of elective hours are delivered at the complex. Students interested in applying for the program should contact the chairperson of the Department of Curriculum and Instruction.

Requirements for Graduation
Several sets of graduation requirements apply to undergraduates in the College of Education seeking a Bachelor of Arts (BA) in education or the institution's recommendation for a teaching certificate.

Students should study carefully the requirements for their particular area of study.

Under Kansas Department of Education policies students are expected to complete all program requirements in effect at the time they are admitted into teacher education. Students transferring to the College of Education will be advised on the basis of the program (check sheet) in effect when they are admitted into teacher education rather than the program (check sheet) in effect when they began their college or university work.

For graduation from the College of Education, students must satisfactorily complete all program requirements, complete a minimum of 124 semester hours of credit, have at least a 2.500 grade point average in the major field, and must have at least a 2.500 overall grade point average.

Requirements for Teacher Certification
All graduates applying for teacher certification in Kansas are required to complete the National Teachers Examination established by the Kansas State Department of Education in order to qualify for their initial certificate. A grade of C or better in student teaching is necessary to receive a recommendation for a teaching certificate.

Prospective teachers in specialized fields of art and music are subject to certain departmental requirements and the general and professional education requirements listed under secondary education. (Students planning to teach fine arts should consult the College of Fine Arts section of the Catalog.)
General Education

A total of 42 hours of general education courses is required for all students in the college, including the following requirements for graduation:

I. Basic Skills courses (12 hours) to be completed with a grade of C or better. Eng. 100 or 101 and 102, College English I and II (6 hours)
Comm. 111, Public Speaking (3 hours)
Math. 111, College Algebra (3 hours)

II. Distribution requirements
A. At least one Introductory Course* in Fine Arts: art history, dance (history), musicology-composition, theater, or an Issues and Perspectives course**
B. At least one Introductory Course* from two different Humanities disciplines: communication (non-basic skills), English (non-basic skills), history, linguistics, modern and classical languages and literature, philosophy, religion, women’s studies, or an Issues and Perspectives course**
C. At least one Introductory Course* from two different Social and Behavioral Science disciplines: anthropology, economics, geography, minority studies, political science, psychology, sociology, or an Issues and Perspectives course** College of Education students must choose Psy. 111Q as one of the Introductory Courses from this division.
D. At least one Introductory Course* from two different Mathematics/Natural Sciences disciplines: biology, chemistry, computer science, geology, mathematics/statistics (non-basic skills), physics, or an Issues and Perspectives course**. One must be biology, chemistry, geology, or physics.
E. At least one Further Study Course in the same discipline as the Introductory Course taken in Fine Arts or the Humanities, or an Issues and Perspectives course**
F. At least one Further Study Course in the same discipline as the Introductory Course taken in Social and Behavioral Sciences, or an Issues and Perspectives course**
G. At least one Further Study Course in the same discipline as the Introductory Course taken in Natural Sciences and Mathematics, or an Issues and Perspectives course**

* No courses in the student’s major discipline may be taken as Introductory Courses.
** At least one but not more than two Issues and Perspectives courses must be selected. No Issues and Perspectives course in the student’s major discipline may be taken.

For students who entered the University prior to Fall 1994, courses in the Undergraduate Catalog and the Schedule of Courses identified by a G or Q suffix qualify for general education credit. These general education requirements are stipulated in previous Undergraduate Catalogs.

College of Education

Specific Requirements
In addition to or as part of the University general education requirements listed above, students applying for a degree from the College of Education or for teacher certification must have Psy. 111. Students seeking teacher certification must also take Stat. 370 or any higher-level math course.

Professional Education

Professional education requirements in areas of specialization and additional general education requirements in these areas are summarized on the following pages.

Communicative Disorders and Sciences
I. General Education
Students majoring in communicative disorders and sciences are expected to meet all general education requirements. In Division B, courses must be taken in two different departments. At least six hours of psychology are required.

II. Professional Education
Preprofessional Block—Courses & Hrs.
CI 271, Introduction to Professional Education
CI 272, Field Experience/Preprofessional Block
CESP 334, Growth and Development
CI 430, Social/Multicultural Education
CI 320, Introduction to Exceptional Child
CI 311, Field Experience/Block I

Block II
CESP 433, Learning and Evaluation
CI 328, Curriculum, Instruction, and Management
CI 312, Field Experience/Block II

III. Elementary Specialization
In addition to the general education requirements and the professional education sequence, students majoring in elementary education must fulfill the teaching specialty emphasis of the elementary program. Students should work closely with a faculty advisor in the College of Education to be sure they meet certification and degree requirements. A check sheet of requirements is available from the College of Education.

Secondary Education

I. General Education
Students majoring in secondary education should meet the requirements in the general education program as listed above.

II. Secondary Teaching Major
Students must fulfill the teaching specialty emphasis of a program as specified in the teaching field section that follows. Only those specialties listed among the combined curricula and departmental majors and minors in the majors and minors section may be counted.

III. Professional Education
The following courses are required:

Preprofessional Block—Courses & Hrs.
CI 271, Introduction to Professional Education
CI 272, Field Experience/Preprofessional Block
For majors in foreign language, math, science, social studies, English

Block I
Course Hrs.
CESP 334, Growth and Development...2
CI 430, Social/Multicultural Education .3
CI 320, Introduction to Exceptional Child ..........2
CI 311, Field Experience/Block I..............1
Block II
CESP 433, Learning and Evaluation .....3
CI 328, Curriculum, Instruction, and Management. 5
CI 312, Field Experience/Block I..............1

In addition to the general education requirements, the professional education sequence, and the requirements for the major, secondary students must complete the pre-student teaching and the student teaching requirements. Students should work closely with a faculty advisor in the College of Education to be sure they meet certification and degree requirements. A check sheet of requirements is available in the College of Education.

For majors in physical education, art, music

Block I
Course Hrs.
CESP 334, Growth and Development...2
CI 430, Social/Multicultural Education .3
CI 320, Introduction to Exceptional Child, or Art E. 518, Art for the Exceptional Child, or Mus. E. 611, Music for Special Education, or PE 360, Adaptive PE. 2
CI 311, Field Experience/Block I..............1
Block II
CESP 433, Learning and Evaluation .....3
CI 328, Curriculum, Instruction, and Management. 5
CI 312, Field Experience/Block II.............1

In addition to the general education requirements, the professional education sequence, and the requirements for the major, secondary students must complete the pre-student teaching and the student teaching requirements. Students should work closely with a faculty advisor in the College of Education to be sure they meet certification and degree requirements. A check sheet of requirements is available in the College of Education.

For majors in music education
For other requirements, see Music Education, College of Fine Arts.

For majors in art education
For other requirements, see Art Education, College of Fine Arts.

For majors in foreign languages
For other requirements, see Modern and Classical Languages and Literatures, Fairmount College of Liberal Arts and Sciences.

Secondary Teaching Fields
The major is generally no fewer than 30 semester hours. (For specific exceptions see languages and the combined curricula programs.) Students may elect certain of the majors offered in Fairmount College of Liberal Arts and Sciences, the College of Fine Arts, or the College of Education. Students meet the specific course requirements of the department in which the major is offered. For example, students may elect to major in history because they wish to become high school history teachers. To do so, they complete the history major as prescribed by the history department in Fairmount College of Liberal Arts and Sciences. In addition, they complete the University’s general education requirements, the professional education sequence, and other requirements for the teacher’s certificate prior to graduation. Students should work closely with a faculty advisor in the College of Education to be sure they meet certification requirements. A check sheet of requirements for each teaching field is available from the College of Education.

Majors and Minors
Art
English language and literature
Foreign language
French
German
Latin
Spanish
Mathematics
Music
Physical education
Science
Chemistry
Natural sciences—biological
Natural sciences—physical
Physics
Social studies comprehensive
Social studies

Combined Curricula
The teaching assignment after graduation often involves a combination of related subjects. For this reason intensive study in the following combined disciplines is offered in lieu of a departmental major and minor.

Students should work closely with advisors to ensure proper course selection for certification and degree. A check sheet of requirements for each teaching field is available from the College of Education.

Natural Science—Biological
This major requires a minimum of 50 hours. A teacher who qualifies under this provision may teach chemistry and general science as well as biology. Students also may make arrangements to qualify to teach other sciences.

Natural Science—Physical
This major requires a minimum of 50 hours. A teacher who completes this program may teach chemistry, general science, and physical science. Students also may make arrangements to qualify to teach other sciences.

Social Studies
Completion of this program will lead to certification in comprehensive social studies at the secondary level. The following fields are included in this certification: American history, world history, government, anthropology, economics, geography, and sociology.

Administration, Counseling, Educational and School Psychology
The Department of Administration, Counseling, Educational and School Psychology offers courses at the undergraduate level taken by students both in and outside of the College of Education. In addition, the department offers programs...
leading to the Master of Education (MED) in administration, the MEd in counseling, the MEd in educational psychology, the Specialist in Education (EdS) in school psychology, and the Doctorate of Education (EdD) in educational administration.

Counseling, Educational and School Psychology

Lower-Division Courses

334. Growth and Development. (2). Examines the growth and development of the individual during early, middle, and late adolescence. Prerequisite: CESP 334 or equivalent or instructor's consent. Repeatable with advisor's consent.

335. Adolescent Development. (3). A study of the growth and development of the individual during early, middle, and late adolescence; emphasizes the relationship among research, theory, and application. Prerequisite: Psy 111Q or equivalent.

334. Growth and Development. (2). Examines developmental theories and principles in the dimensions of physical, cognitive, and psychosocial growth. Explores the social and cultural contexts in which growth and development occur. Students demonstrate openness and objectivity towards issues and theories by examining their own biases. Prerequisites: Psy 111Q, acceptance into teacher education program, and concurrent enrollment in CI 311, 430, 601.

430. Educational and School Psychology

433. Learning and Evaluation. (3). Examines the nature of learning and memory, learning strategies, individual differences, and social factors influencing learning. Also examines effective use of measurement instruments, observations, questioning strategies, and grading plans. Students learn to apply psychological and evaluation principles to teaching and learning. Prerequisites: CESP 334, CI 311, 520, 430.

450. Workshops in Education. (1-4). Accommodates a variety of topics related to counseling, guidance, and communication issues in helping relationships. May emphasize different preselected topics during a semester. Repeatable for credit.

490. Independent Studies. (1-3).

Courses for Graduate/Undergraduate Credit

681. Cooperative Education (1-8). A work-related placement that integrates theory with a planned and supervised professional experience designed to complement and enhance the student's academic program. Prerequisites: graduate standing in the department and department chairperson approval. No more than 3 credit hours will be allowed in one Plan of Study. Repeatable for credit. Offered Cr/NCr.

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) critical research methodology.

704. Introduction to Educational Statistics. (3). An introduction to statistical methods, including measures of central tendency, measures of variability, correlation, chi-square, median test, t-test, and regression analysis. Prerequisite: CESP 701 or equivalent, or instructor's consent.

728. Theories of Human Development. (3). Describes what developmental theories are, how they work, and how they are used to understand human nature. Uses theoretical assumptions and research to systematically evaluate developmental theories in terms of their scientific worthiness and their ability to address characteristics of human development. Focuses on those theories which help shape the way we currently view human development as well as significant new perspectives which may shape the way we will view it in the future. Prerequisite: CESP 334 or equivalent or departmental consent.

732. Behavioral Management. (3). Presentation and utilization of psychological principles and techniques for dealing with developmental behavior and learning patterns. Emphasizes the preschool and elementary school child. Prerequisite: CESP 334 or equivalent or departmental consent.

750. Workshops. (1-4).

752. Special Studies In Education. (1-4). For students with a special interest in a particular area of study. Prerequisites: CESP 701, 704, 802, 803, 804.

Courses for Graduate Students Only

804. Principles and Philosophy of Counseling. (3). 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.

807. Counseling: Child Abuse and Neglect. (2). The etiology, symptoms and indicators, prevention, and prevention of physical abuse and neglect, emotional abuse and neglect, and sexual abuse. Prerequisite: CESP 701, 704, 802, 803, 804.

808. School Psychology Professional Issues. (3). Examines roles and functions of school psychologists within the context of historical foundations of the profession. Uses lecture, presentation, and observation 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.

810. Elementary School Counseling. (3). The role of the elementary counselor in providing individual and group counseling, group guidance, and consultation in the school setting. Prerequisites: CESP 701, 704, 802, 803, 804.


815. Career Development. (3). For master's level students interested in helping students and adults in career development and related concerns. Covers (1) career development of individuals across lifespan, (2) sources 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 701, 704, 802, 803, 804.


820. Learning Theory and Instruction. (3). Applications of theories in educational psychology and learning principles. Prerequisite: CESP 701 or departmental consent.

821. Multicultural Issues in Counseling. (2). Acquaints students with belief and behavior differences which are often the cause of conflicts among people of various cultures. Prerequisites: CESP 701, 704, 802, 803, 804; or instructor's consent.

822. Psychometric Procedures 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; counseling students must also have CESP 802, 803, 804.

823. Experimental Design in Educational Research. (3). A consideration of sampling theory, design for testing hypotheses about populations from samples, correlation coefficients, means and differences between means, simple factorial designs, designs involving matched groups, designs involving repeated measures of the same group, and analysis of covariance. Prerequisite: CESP 704.
824. Techniques of Counseling. (3). Examines and practices techniques of counseling through simulated counseling situations and extensive examination of counseling case studies. Prerequisites: CESP 728, 821, 822, and Psy 845.

825. Group Counseling Techniques. (2). Examines different kinds of groups, group selection, communication patterns in groups, and issues to be addressed in group settings. Prerequisites: CESP 821 and 822.

830. Introduction to Marriage and Family Counseling. (3). A survey course on marriage and family counseling including theory, techniques, and research in the field. Prerequisite: CESP 803 or departmental consent.


837. Family Issues in Counseling. (3). Covers the family issues of child abuse, substance abuse, and loss; how these factors influence the growth and development of children, adolescents, and adults; and how to make interventions appropriate to the work setting. Prerequisite: graduate standing.

840. Psychology of Exceptional Children. (3). Study of the conceptual and theoretical formulations, empirical evidence, and research concerning behavioral characteristics of exceptional children.

852. Special Studies. (1-4). Covers specific topics identified by the department in consultation with institutions or groups of graduate students. Course procedures vary according to topic. Repeatable. Prerequisite: instructor’s or departmental consent.

853. Law, Ethics, and Multicultural Issues for School Psychologists. (3). For school psychology students and practicing school psychologists. Covers issues of legislation, litigation, professional ethics, and cultural diversity that impact the practice of school psychology. Prerequisite: admission to the school psychology program or instructor’s consent.

855. Individual Intelligence Assessment. (3). Use of individual tests for appraisal of intelligence, adaptive behavior, and learning styles. Considers research and clinical theory in a lecture-discussion format, which includes some case simulation and practice activities. Prerequisites: CESP 823 and instructor’s consent.

856. Counseling Practicum. (3). Supervised practice in counseling. Requirements include at least 60 hours of applied experience, repeatable for credit. Prerequisites: CESP 824 and 825 and coordinator’s consent. Must be taken within one year of completion of CESP 824.

857. Professional and Ethical Issues. (2). Study of major ethical, legal, and professional issues in counseling. Prerequisites: CESP 824 and 825, or concurrent enrollment.

858. Diagnostic Testing. (3). Use of individual tests, rating procedures, and behavioral techniques for the appraisal of perceptual development, cognitive development, classroom behavior, and academic skills. Considers assessment theory and research relevant to these areas in a lecture-discussion format which includes some case simulation and practice activities. Prerequisites: CESP 822, 855, and instructor’s consent.

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.


862. Presentation of Research. (1-2). A project submitted in thesis manuscript form. Repeatable for a maximum of two hours of credit. Prerequisite: CESP 860.

866. Practicum in Guidance Services. (2-3). Supervised practice in administration, test interpretation, group counseling, and other activities of the department. Prerequisites: CESP 833 or 810 and instructor’s consent.

867. Practicum in Group Guidance and Counseling Methods. (3). Supervised practice in group guidance and counseling. Repeatable for three 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.


881. Seminar in School Psychology. (1). Examines current trends and issues within the area of school psychology. Also considers alternative role models for the school psychologist from the standpoint of research and program development in related areas such as special education, general education, and professional psychology. Repeatable to a maximum of four hours. Prerequisite: CESP 804 or concurrent enrollment or instructor’s consent.

890. Special Problems. (1-3). Directed reading and research under the supervision of a graduate instructor. Prerequisite: departmental consent.

903. Counseling Theory II. (3). In-depth critical review of research and applicability of major theories to the evaluation and design of interpersonal intervention strategy.

914. Consultation Techniques. (3). Intensive study of the literature in counseling, school psychology, social psychology, and administration that provides a basis for consultation techniques in the interpersonal context of school and work settings.

915. Intervention Design. (2). Gives the student further experience and skill in utilizing theories of interpersonal relations in creating macro- and micro-learning experience designs for individuals or groups experiencing dysfunctional situations. Stresses individual and organizational effectiveness assessment skills.

926. Seminar: Selected Topics. (2). Intensive study of current issues, techniques, research, and application of the selected topic. Repeatable for different topics for a maximum of eight hours. Prerequisite: 15 hours of related graduate course work.

928. Seminar: Postsecondary Student Services. (2). Intensive study of issues, theories, approaches, and research in topics related to postsecondary student services. Repeatable for different topics for a maximum of eight hours.

930. Marriage and Family Counseling II. (3). An advanced course on marriage and family counseling, including theory, techniques, and research in the field. Prerequisite: CESP 803, 830, 30 graduate hours or instructor’s consent.

934. Personality Assessment. (3). Focuses on theory, interpretation of instrument representing three major approaches to personality assessment: projective techniques, behavioral techniques, and personality inventories. Includes alternative personality assessment approaches and reviews of personality theory and psychopathology. Includes supervised experience. Prerequisites: CESP 822, 855, post-master’s standing or last six hours of master’s program, and instructor’s consent.

946. Practicum in School Psychology. (3 or 6). Supervised practice in providing school psychological services to children in school, clinical, or community agency settings. Requires at least 300 hours of applied experience per three hours of credit. Repeatable for a maximum of six hours. Prerequisite: departmental consent.

947. Internship in Counseling: Internal or External. (2). The Internal Internship is normally a full-time placement, appropriate to career objectives in a position within an agency, institution, or school. The External Internship is normally a series of planned placement intervention experiences in a variety of settings designed to develop expertise in interpersonal consulting. Repeatable up to 6 hours of credit.

948. Practicum in Marriage and Family Counseling. (3). Prerequisite: CESP 930, graduate-student status, or departmental consent.

977. Internship in School Psychology. (2). Supervised experience as a school psychologist in a school or agency setting. Requires at least 600 hours of applied experience. Repeatable for a maximum of four hours. Prerequisites: CESP 946 and departmental consent.

990. Special Problems in Counseling and School Psychology. (1-3). Directed problems in research for EdD students under supervision of a graduate instructor. Prerequisites: CESP 701 and instructor’s consent.

Educational Administration and Supervision

Courses for Graduate/Undergraduate Credit

861. Cooperative Education. (1-8). A work-related placement that integrates theory with a planned and supervised professional experience designed to complement and enhance the
student's academic program. Prerequisite: 2.5 GPA. Repeatable for credit. Offered Cr/NC.

750. Experienced Administrator's Workshop. (1-2). Offers a variety of administrative topics.

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.

785. A Survey of School Administration Today. (3). An introductory experience for students interested in learning more about school administration at the K-12 level. Emphasizes the role of the administrator as an administrator, problem solver, legal/financial expert, instructional supervisor, and human resource developer. Familiarizes students with the skills, understandings and career commitments essential to success in school administration. Not applicable to EAS graduate degree program requirements. Prerequisite: admission to Graduate School.

Courses for Graduate Students Only

801. Introduction to Educational Administration. (3). An examination of educational foundations and the major theories of education and application to specific problems. Provides an overview of administration of the school and human problems involving the community and staff. Includes data gathering for self-evaluation of supervisory potential.

803. Seminar: Professional Self-Assessment and Inquiry. (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.

804. Clinical Supervision for Administrators/Supervisors. (3). An examination of clinically-oriented supervisory models, explicit teaching approaches, and their practical applications. Emphasizes the use of formative evaluation strategies that focus on performance issues coming from actual teaching situations and the teacher's guided analysis of these issues. Also considers related responsibilities of the supervisor for planning and organizing staff development activities. Prerequisite: EAS 801.

805. Practicum: School Opening 1. (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.

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. Examines 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.

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. Applies financial planning concepts to the school setting and manages the day-to-day financial and other resources allocation to schools. Prerequisite: admission to the MED in educational administration or instructor's consent.

823. Seminar: Interpersonal Relations and Supervision. (3). Examine the theoretical concepts related to clinically oriented supervisory models and explicit teaching approaches. Study formative evaluation concepts focusing on performance issues related to actual teaching situations and the teacher's guided analysis of these issues. Review the responsibility of the supervisor for planning and organizing staff activities, including the development of interpersonal skills. Engage 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.

826. Curriculum Management. (3). A study of curriculum philosophies, theories, and developmental processes. Includes examination of recent programs and proposals, curriculum development at the building and school system levels and techniques of program evaluation.

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

831. Seminar: Human Development and Managing the Learning Environment. (3). Examine developmentally appropriate practices in the classroom for student learning and behavior management. Includes discussion of developmental psychology sufficient to interpret human developmental patterns and their behavioral implications. Prerequisite: admission to the MED in educational administration or instructor's consent.

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 that research can assist in the school. Prerequisite: admission to the MED in educational administration or instructor's consent.

833. Seminar: School Law and Personnel Management. (3). Examine concepts related to staffing issues, including selection and recruitment, certification, orientation, staff development, evaluation, transfer and dismissal, and retirement. Cover general concepts of law, interpretations of statutes and court decisions affecting education, and the legal responsibilities of school personnel and professional negotiations. Prerequisite: admission to the MED in educational administration or instructor's consent.

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

836. School Personnel Management. (3). Advanced study of staff problems: selection and recruitment, certification, orientation, service training, evaluation, transfer and dismissal, and retirement. Prerequisites: EAS 804 and 842.

842. School Law. (3). General concepts of law, interpretations of statutes and court decisions affecting education, and the legal responsibilities of school personnel.

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.

845. Practicum: Curriculum and Learning Theory. (3). Apply the concepts of curriculum theories and development, emphasizing skills necessary to propose, implement, and evaluate various building programs. Address applications of major learning major learning theories and principles as they relate to academic and behavioral aspects of the classroom. Prerequisite: admission to the MED in educational administration or instructor's consent.

852. Special Studies in Educational Administration and Supervision. (1-3). Group studies 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.

84. Finance and Facilities Management. (3). Designed for those preparing to become administrators at the school-building level. Focuses upon the knowledge and skills necessary to plan and organize work groups, projects, and the resources necessary to carry out day-to-day functional activities of schools.

860. Research Seminar in Educational Administration and Supervision. (3). Designed for students in advanced study. Emphasizes development of research proposals and studies. Prerequisite: completion of master's degree or advisor's consent.

862. Presentation of Research. (1-2). A project submitted in thesis manuscript form. Repeatable for a maximum two hours of credit. Prerequisite: EAS 860.

873. Interpersonal Skills for Administrators. (3). Designed as a laboratory approach to interpersonal skills development. Students engage in simulation exercises to acquire skills in dealing with groups.


878. Strategies for School Improvement. (3). An examination of organizational/instructional characteristics of schools as determinants of their effectiveness (e.g., pupil academic achievement). Considers various school improvement models, including programs designed specifically for elementary and secondary schools. Research studies considered examine established correlates for school effectiveness, as well as related teacher effectiveness variables. Prerequisites: EAS 801 and 804.

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.

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

906. Field-Based Research I. (3). Follows EAS 986 and continues field-based research activities and development of dissertation proposals. Prerequisites: admission to EdD program, EAS 986, and concurrent enrollment in EAS 972.

987. Field-Based Research II. (3). Follows EAS 986 and continues field-based research activities and development of dissertation proposals. Prerequisites: admission to EdD program, EAS 986, and concurrent enrollment in EAS 972.

989. Field-Based Research III. (3). Follows EAS 986 and 987 and culminates this field-based sequence. Prerequisites: admission to EdD program, EAS 986 and 987.

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.

991. Practicum in Educational Administration and Supervision. (1-2). Designed for persons who have been employed in their first administrative position and are seeking recertification in Kansas. Course is individually designed by an EAS faculty member with the student and his/her school district supervisor. Addresses the needs of the student and of the district. Thrust is to assist the student to extend basic skills relevant to a particular administrative assignment. The student must register for three hours of credit in EAS 991 to meet recertification requirements. S/U grading only. Prerequisites: completion of master's degree and departmental consent.
strict-level administrators, and includes field experiences designed to emphasize knowledge and skill in administrative practices and procedures. Work is designed for each student's projected administrative interest. Students must file an application for this terminal course.

999, Dissertation Research. (1-6). Taken concurrently with EAS 986, 987, and 988, and for six credits each semester during the last year of enrollment. Provides students with dissertation proposal and dissertation advisement and may be taken for one to six 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 EAS and required doctoral course work.

Communicative Disorders and Sciences

The Department of Communicative Disorders and Sciences provides academic and clinical education for students at Wichita State University who wish to work with communicatively handicapped children and adults. The undergraduate program offers broad, comprehensive, and preprofessional preparation for specialized training, which is offered on the graduate level. Graduate work, culminating in a master's degree, is required to obtain professional certification as a speech-language pathologist or audiologist in the public schools, hospitals, or rehabilitation centers, or to engage in private practice. With an undergraduate, preprofessional major, students completing the master's program will be eligible to apply for certification by the American Speech-Language-Hearing Association. The PhD in communicative disorders and sciences prepares individuals to function professionally as independent clinicians, as teacher-scholars in an academic setting, or as program administrators.

Undergraduate Major

The preprofessional, undergraduate major places primary emphasis on the general area of communicative sciences and disorders and beginning specialized emphasis on speech and language pathology or audiology. Supervised practicum courses are required as part of the educational program.

Students should make formal application for practicum courses one semester prior to enrollment. Evaluation of the student's speech, language, and hearing proficiency will be conducted. Significant deviations in any area must be corrected to maximum ability before enrollment in practica courses or student teaching. In addition, medical clearance is required for all observation and practica classes. Admission to a major in CDS does not constitute assurance of automatic entrance into the practica or student teaching sequence.

Undergraduate students may major in communicative disorders and sciences in either the College of Education or Fairmount College of Liberal Arts and Sciences. Most students take the program in the College of Education, but those wishing to emphasize applied language study may enroll in the communicative disorders and sciences major in Fairmount College of Liberal Arts and Sciences. In either case, all students must satisfy the general education requirements of the University. Students in the College of Education must select certain courses from the general education program that will satisfy teacher certification requirements. These are stated under general requirements at the beginning of the College of Education section of the Catalog.

Speech-Language Pathology

The major with emphasis in speech-language pathology consists of a minimum of 42 hours. Students should work closely with advisors to ensure proper course selection for certification and degree. A check sheet of requirements is available from the College of Education and the department office, 113 Hubbard Hall.

Audiology

The major with emphasis in audiology consists of a minimum of 41 hours. Students should work closely with advisors to ensure proper course selection for certification and degree. A check sheet of requirements is available from the College of Education and the department office, 113 Hubbard Hall.

Applied Language Study in Fairmount College of Liberal Arts and Sciences

The major with emphasis in applied language study consists of a minimum of 36 hours. Students should work closely with advisors in the College of Education and Liberal Arts and Sciences to ensure proper course selection for the degree. A check sheet of requirements is available from the College of Education and from Fairmount College of Liberal Arts and Sciences.

Teacher Education Certification

One full semester of practicum in the public schools is required for all students working toward certification as public school speech-language pathologists or audiologists.

The assignment for student teaching begins with the opening of the public schools, and the student teacher is expected to follow the public school calendar, on a half-day basis, for a semester.

Students must apply for admission to the student teaching semesters. They must have an overall grade point average of 2.750; a 2.750 average in the major field; a grade of C or better in English 101 and 102 and in Communication 111, or their equivalents; and the recommendation of the major department.

Clinical Certification

The communicative disorders and sciences undergraduate preprofessional major may be applied toward certification by the American Speech-Language-Hearing Association. This certification requires a master's degree, with major emphasis in speech-language pathology or in audiology.

Undergraduate Minor

A minor in communicative disorders and sciences consists of 17 hours and may be earned in either the College of Education or Fairmount College of Liberal Arts and Sciences. The following courses are recommended for a minor unless other arrangements are made:

CDS 111Q, 232, 300, 304, 306, and 501. Arrangements for the minor should be made in consultation with the Department of Communicative Disorders and Sciences.

Other Requirements

Participation in the department's clinical practica courses requires that a student obtain medical clearance prior to the start of the course. This requirement is indicated in the individual course descriptions. Procedures to be followed may be obtained from the department's office. Also, seniors and graduate students who participate in active clinical practice during the year must purchase professional liability insurance in the amount of not less than $1,000,000/$3,000,000. This must be done on a yearly basis, when appropriate.

CDS 770, Communicative Development and Disorders, is a general survey course and may not be used as part of either a major or minor in communicative disorders and sciences at the undergraduate or graduate level without departmental consent.

Clinical Services

Clinical services for members of the community with speech, language, or hearing


disorders, as well as students enrolled at Wichita State, may be arranged with the Speech-Language-Hearing Clinic. Fees are charged for these services.

General
Admission to courses is possible with a minimum grade of C in each stated prerequisite or its judged equivalent, or with departmental consent, unless otherwise specified in the course description.

Lower-Division Courses

260. Signing Exact English I. (1, 2R). Introduction to the theory and use of Signing Exact English (SEE) as a means of communication with the hearing impaired. Independent outside practice is necessary to facilitate skill.

281. Cooperative Education. (1-8). Allows students to participate in the cooperative education program. Offered Cr/NC only.

Upper-Division Courses

360. Signing Exact English II. (1, 2R). An advanced class in the theory and use of Signing Exact English (SEE) as a means of communication with the hearing impaired. Emphasizes vocabulary and interpreting skills. Prerequisite: CDS 260.

365. Introduction to American Sign Language. (3). Focuses on the use of American Sign Language as used by the American deaf community. Development of basic communication skills leads to basic conversational skills in ASL.

465. Conversational American Sign Language. (3). Increases vocabulary and speed of the use of ASL. Focuses on a greater fluency in expressive and receptive skills. Develops intermediate conversational skills. Prerequisite: CDS 365.

481. Cooperative Education. (1-8). See CDS 281.

490. Directed Study in Speech and Language Pathology or Audiology. (1-3). Individual study or research on specific problems. Repeatable. Instructor’s consent must be obtained prior to enrollment.

Courses for Graduate/Undergraduate Credit


681. Cooperative Education (1-8). A work-related placement that integrates theory with a planned and supervised professional experience designed to complement and enhance the student’s academic program. Prerequisite: 2.5 GPA. Repeatable for credit. Offered Cr/NC.

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

750. Workshop in Communicative Disorders and Sciences. (1-4). Offered periodically on selected aspects of speech and hearing habilitation.

Courses for Graduate Students Only

800. Research Methods. (3). A survey of the different research methods utilized in the fields of communicative disorders 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. Prerequisite: graduate student status.

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.

892. Presentation of Research. (1-3). A directed research project culminating in a manuscript appropriate for publication. Repeatable, but total credit hours may not exceed three. Prerequisites: CDS 800 and instructor’s consent prior to enrollment.

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

899. Thesis. (1-2). Repeatable, but total credit hours counted toward degree requirements shall not exceed two. Prerequisite: instructor’s consent.

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

940. Advanced Selected Topics in Communicative Disorders and Sciences. (1-4). Advanced individual or group study in specialized areas of communicative sciences and disorders. Intended for doctoral students or advanced master’s-level students. Repeatable. Prerequisites: advanced standing and instructor’s consent.

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

994. Seminar in Clinical Research. (3). Presentation of advanced models in research design applicable to the investigation of communicative disorders in a clinical setting. Prerequisites: CDS 800 or equivalent and competency in statistics.

995. Research Proseminar. (1). A weekly seminar of informal discussion and formal presentation of ongoing or planned research by the CDS faculty and doctoral graduate students. Goal is to provide CDS doctoral students with new and valuable knowledge and insights regarding how real world research is performed. Prerequisite: doctoral student standing.


Communication Sciences

Admission to courses is possible with a minimum grade of C in each stated prerequisite or its judged equivalent, or with departmental consent, unless otherwise specified in the course description.

Upper-Division Courses

300. Anatomy and Physiology of the Speech and Hearing Mechanisms. (3). A study of the prenatal development and basic anatomy of the systems necessary for speech and hearing. Discusses the respiratory, pharyngeal, articulatory, and auditory mechanisms from a functional point of view. Prerequisite: CDS 111Q.

304. Language I: Normal Acquisition. (3). Cross-listed as Ling. 304. The study of the acquisition of language in the child from birth to six years of age. Evaluation of various acquisition theories in the light of current psychological and linguistic thought. Emphasizes the development of phonology, morphology, syntax, semantics, and pragmatics. Prerequisite: CDS 306 or concurrent enrollment.

360. Phonetics: Theory and Application. (3). Cross-listed as Ling. 360. Introduction to the International Phonetic Alphabet and its use in transcribing the sounds of American English with emphasis on the major dialects. Study of physiologic, acoustic, and perceptual specification of speech sounds and a survey of current phonetic theory and applications to speech improvement. Extensive practice in transcription of speech. Prerequisite: prior or concurrent enrollment in CDS 111Q.

Courses for Graduate/Undergraduate Credit

501. Speech and Hearing Science. (3). Examination of elements in the chain of events that lead to human communication. Studies speech production and perception at physiological and acoustic levels, emphasizing acoustics. Prerequisite: CDS 111Q.
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: at least senior standing.

Courses for Graduate Students Only

801. Advanced Speech and Hearing Science. (3). Advanced study of speech and hearing processes, primarily in their normal aspects. Attention to current understanding of speech generation, the speech signal, and the normal function of hearing. Attention also to techniques of investigation of these processes. Prerequisite: CDS 501 or equivalent or departmental consent.

900. Speech Acoustics. (3). A detailed analysis of the acoustics of speech. Studies the various theories of speech sound production along with the instrumental analysis of speech sounds and ends with an examination of various speech disorders from the point of view of acoustics. Prerequisite: CDS 801.

903. Speech Perception. (3). A critical review of the theories and empirical research addressing the perception of speech, species-specific communication, and speech recognition systems through artificial intelligence. Discusses both unimodal and bimodal models of perception. Prerequisite: CDS 900.

904. Speech Physiology. (3). A critical review of pertinent research concerning the physiological bases of speech. Emphasizes understanding the instrumental techniques utilized in such studies. Prerequisite: CDS 801.

Speech and Language Pathology

Admission to courses is possible with a minimum grade of C in each stated prerequisite or its judged equivalent, or with departmental consent, unless otherwise specified in the course description.

Lower-Division Courses

111Q. Disorders of Human Communication. (3). An orientation to disorders of human communication, communicative and psychosocial problems commonly encountered, and general approaches to habilitation.


Upper-Division Courses

414. Speech-Sound Disorders. (3). Basic methods and procedures of identifying, assessing, analyzing, and remediating speech-sound disorders. Practice in phonetic transcription of highly unintelligible speech samples. Prerequisite: CDS 306.


419. Organic Anomalies. (3). Discusses assessment and remediation strategies in the management of communication disorders resulting from chromosomal, endocrinologic, metabolic, and structural anomalies. Addresses other issues including medical problems, ethical concerns, behavioral control, feeding techniques, and augmentative communication.

490. Directed Study in Speech and Language Pathology or Audiology. (1-3). Individual study or research on specific problems. Repeatable for credit. Instructor's consent must be obtained prior to enrollment.

Courses for Graduate Undergraduate Credit

510. Language III: Introduction to Evaluation. (4). Provides the principles underlying basic diagnostic processes for all ages, emphasizing the principles and procedures for assessing language disorders in children, including observations, case histories, interviewing, and administering and interpreting formal and informal assessment instruments. Requires observation of evaluation procedures in the speech-language-hearing clinic and a laboratory experience. Prerequisites: CDS 414, 416, 419.

516. Language IV: Introduction to Intervention. (3). Discussion of current language intervention strategies and programs for infants, toddlers, and 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: CDS 416 and 510.

635. Clinical Methods in Speech and Language. (1). Techniques and methods for development of clinical skills in a supervised practicum setting. Children with language and speech sound disorders provide the primary focus. Development of the clinician process will include clinical procedures for therapy, writing behavioral objectives and progress reports, and conducting parent conferences. Prerequisites: junior or senior standing, 20 clock hours of observation, CDS 414 and 416, prior or concurrent enrollment in CDS 510.

636. Beginning Practicum in Speech and Language. (1). Supervised practicum of clinical assignments in the University Speech-Language-Hearing Clinic. Prerequisites: prior or concurrent enrollment in CDS 635, instructor's consent one semester prior to enrollment, medical clearance.

676. Teaching English as a Second Language (Methods). (3). Discusses current methods of teaching English to nonnative speakers. Students learn to analyze interlanguage patterns and to design appropriate teaching units for class and language laboratory use.


712. Fluency Disorders. (3). A review of 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: senior standing and CDS 500, 510.


716. Language Disabilities in Children and Adolescents. (3). Examination of various approaches to working with children and adolescents with language abilities. 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: CDS 416 or departmental consent.

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.

780. Communication Disorders in Educational Settings. (3). Organization, administration, and professional relationships in public school speech and language management programs on the elementary and secondary school levels. Emphasizes procedures and materials for surveying, scheduling, writing IEP's; therapeutic management, record keeping, and utilization of various instructional media. Should be taken prior to student teaching, CDS 781 and 782. Prerequisite: prior or concurrent enrollment in CDS 510.

781. Speech and Language Practicum in the Public Schools (2). Half-time participation in a public school speech and language management program under the guidance of a certified clinician and a University supervisor. Prerequisites: graduate standing, CDS 716 and 780, departmental consent one semester prior to enrollment, and medical clearance.
Courses for Graduate Students Only

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: CDS 605.

811. Neurol ogy of Speech and Language III: Aphasia and Head Trauma. (3). Language assessment and treatment strategies in adult aphasia, closed head injury, and right hemisphere communication impairment. Includes medical aspects of stroke rehabilitation, transdisciplinary intervention, and contemporary and future professional issues in clinical aphasiology. Prerequisite: CDS 605.

815. Interviewing and Parent Counseling. (3). Provides information on the structure and conduct of different types of interviews, and consideration of the "helping" role, as practiced by professionals who work with exceptional children or adults. Focuses on information supportive of developing effectiveness in these roles. Considers multicultural concerns.

818. Communication Disorders in Medical Settings. (3). 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: CDS 810 and 812.

830. Advanced Methods in Speech and Language Evaluation. (1). Clinical methods for evaluation and diagnosis of children and adults presenting with speech and language disorders. Prerequisites: CDS 510 or equivalent, concurrent enrollment in CDS 831, and instructor's consent.

831. Evaluation Processes. (1). Provides the student with information regarding speech and language evaluation processes and procedures. Prerequisites: CDS 510, concurrent enrollment in CDS 830, and instructor's consent.

832. Beginning Graduate Methods. (1). Lecture and class discussions covering various types of communication disorders and management techniques/methods. Relates theories and methods to students' clinic and practicum assignments. Designed for students with 20 or more practicum clock hours. Prerequisites: CDS 635, 636, or equivalent, instructor's consent, concurrent enrollment in 836.

833. Advanced Methods in Hospital/Adult Care. (1). Class discussions cover various topics pertaining to hospital and adult care practicum experiences. Relates theory and methods to student's practicum assignments. Prerequisites: prior enrollment in CDS 818, concurrent enrollment in CDS 836, instructor's consent.

834. Advanced Methods for Phonological Disorders. (1). Procedures for evaluation and remediation of children's highly unintelligible utterances. Discussion of clients' individual needs. Prerequisites: prior or concurrent registration in CDS 714, concurrent enrollment in CDS 836, instructor's consent.

836. Graduate Practicum in Communicative Disorders. (1-2). Repeatable. Supervised application of diagnostic and/or clinical management techniques with individuals presenting communicative disorders. Prerequisites: CDS 636 or equivalent, instructor's consent, medical clearance, concurrent enrollment in a practicum methods course.

837. Advanced Methods in Language. (1). Lecture and class discussions cover various types of language disorders. Relates theories and methods to students' clinic and practicum assignments. Prerequisites: CDS 635 or 832 or equivalent, CDS 516, concurrent enrollment in 836, instructor's consent.


839. Advanced Methods in Accent Modification. (1). Lecture and discussion of techniques for foreign accent and dialect modification. Relates techniques to students' practicum experience in CDS 570. Attendance in CDS 570 required. Prerequisites: CDS 635 or 832 or equivalent, concurrent enrollment in CDS 836.

Audiology

Admission to courses is possible with a minimum grade of C in each stated prerequisite or its judged equivalent, or with departmental consent, unless otherwise specified in the course description.

Lower-Division Course

250. Introduction to Audiology. (3). 3R; 1L. History and scope of the field. Studies basic aspects of normal hearing function and surveys audiology testing procedures, including audiomteric screening. Also includes an introduction to the use of hearing aids, auditory training, lip reading, and rehabilitative counseling. Prerequisite: CDS 111Q.

Upper-Division Courses

350. Auditory Disorders. (2). Introduction to the etiology, nature, and symptomology of auditory disorders and pathologies. Discusses basic principles of audiogram interpretation, surgical protocols, and models of aural habilitation including amplification. Prerequisite: CDS 250.


452. Beginning Practicum in Audiology. (1). Supervised practicum of audiomteric techniques in the University Audiology Clinic. Requires 24 hours of supervised audiomteric practicum per week. Prerequisites: CDS 350, medical clearance, instructor's consent, senior standing, 25 hours of observation, concurrent enrollment in CDS 451.

Courses for Graduate/Undergraduate Credit

550. Senior Seminar in Audiology. (2). An exploration of theories, principles, practices, and pitfalls of audiology emphasizing creating dynamic models for research interpretation, clinical interaction, and professional management. Examines the current educational, professional, and ethical issues in clinical audiology and hearing science. Prerequisite: CDS 450 or senior standing.

685. Methods in Auditory Assessment-SLP. (1). Methods in audiological 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 evaluation and fitting, counseling, and others as appropriate. Prerequisites: CDS 250 and 350 or equivalents.

686. Practicum in Auditory Assessment-SLP. (1). Speech and language pathology students engage in practicum experiences in audiological screening and assessment as arranged. Prerequisites: CDS 250 and 350 or equivalents and concurrent enrollment in CDS 686.

751. Clinical Audiology I. (3). 3R; 1L. Techniques and procedures for administering the basic auditory test battery and the interpretation of audiomteric results. Prerequisite: graduate student status.

752. Clinical Audiology II. (3). 3R; 1L. Diagnostic and rehabilitative procedures in the audiology clinic. Techniques and procedures for the administration and interpretation of special auditory tests including tests for pseudohypoacusis, predictive acoustic reflexes, tests for central auditory pathology, and calibration. Prerequisite: CDS 751.

785. Methods in Aural Rehabilitation. (1). Discusses topics pertaining to the provision of aural rehabilitation services for children and adults. Includes current practices in aural rehabilitation for children, adults, and the elderly; procedures and materials for those services; and current therapy by student clinicians enrolled in practicum. Repeatable. Prerequisite: CDS 764 or equivalent.

786. Practicum in Aural Rehabilitation. (1). Provides methods for the habilitation/rehabilitation of hearing-impaired children and adults. Prerequisites: CDS 764, concurrent enrollment in CDS 785, and instructor's consent.

Courses for Graduate Students Only

826. 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: CDS 250, 826, DS 202.

827. Introduction to Psychoacoustics. (2). 1R; 1D. Basic principles underlying the perceptual hearing process, emphasizing the interdependencies between sound stimuli and subjective auditory experience as related to communication behavior. Prerequisite: CDS 826.

851. Medical Audiology. (2). Many hearing disorders require evaluation/treatment by both the audiologist and medical professions. Reviews the audiological and physiological/medical aspects of the more common of these conditions found in children and adults. Prerequisites: CDS 250, 826, or instructor's consent.

854. Community and Industrial Audiology. (2). Reviews recent developments and research with attention to industrial audiology, federal and state regulations, and environmental noise problems. Prerequisite: CDS 751.


858. Auditory Evoked Potentials. (3). Techniques and procedures for administration and interpretation of physiologic tests of the auditory system, including electrocochleography (ECOG), auditory brain stem response (ABR), and the later occurring cortical evoked potentials (MLF, LAEP, and P300). Prerequisites: CDS 605, 826, 851.

859. Electrophysiography. (2). Techniques and procedures for clinical evaluation of the functional status of the peripheral (inner ear) and central nervous system portions of the vestibular or balance system. Prerequisite: CDS 858.

860. Amplification I. (3). 3F; 2L. The history and function of hearing aids, auditory trainers, and assistive listening devices. The measurement and significance of the electroacoustic characteristics. The principles and procedures for the selection and recommendation of specific amplification systems for individual hearing losses. Prerequisite: CDS 751.

861. Amplification II. (3). Review of recent developments in research involving the measurement of real ear insertion response and real ear effects of plumbing modification. A discussion and demonstration of the performance of digital and analog/digital hybrid amplification systems. A detailed evaluation of requirements for amplification dispensing. Counseling techniques related to hearing aid fitting. Prerequisite: CDS 860.

885. Advanced Methods in Auditory Assessment-Aud. (1). Methods in audiological evaluation for audiology students. Discusses procedures for diagnostic evaluation of a broad range of audiologic disorders in infants, children, and adults in weekly class meetings, along with procedures for hearing aid evaluation and fitting, counseling, and others as appropriate. Prerequisite: audiology faculty's consent.

886. Advanced Practicum in Auditory Assessment-Aud. (1). Practicum experiences encompassing diagnostic evaluations covering a range of audiologies disorders and types of evaluations in infants, children, and adults, including standard audiological batteries, mastoidectomy, site-of-lesion testing, electrophysiological measurements, hearing aid fitting and dispensing, patient follow-up, and counseling. Prerequisites: audiology faculty's consent.

Curriculum and Instruction

Undergraduate teacher education in curriculum and instruction is a five-stage competency-based program beginning with an introduction to teaching and concluding with reflections on an extended student teaching experience. Through intensive academic and field experience combined with systematic student reflection, the goal of this program is to produce effective, informed, and reflective teachers, capable of independent practice and continued professional growth.

Students enter the set of course work for the teacher education program when they are in their 35th hour with the Professional Block taking CI 271 and 272 concurrently. Each block thereafter contains two to four classes which must be taken concurrently. The courses in each of the blocks must be taken together and completed before entering the next set of course work.

Lower-Division Courses

201. The Computer as a Learning Tool I. (1). Provides computing skills necessary to succeed in the academic environment. Learn how to use computers and software to organize course work, outline and plan papers, write and edit text, search for information, compile and report data, and integrate data with text. Apply the course content in a computer lab under the supervision of the instructor.

271. Introduction to Professional Education. (2). Students examine the career in education, characteristics of good teaching, the nature of teacher education programs, basic historical and philosophical foundations of education, and current employment options. They analyze their own personalities, personal strengths and weaknesses, and values and beliefs about teaching, and reach an informed decision regarding their own suitability for teaching. Prerequisites: C or better in English I and II, Communication, and College Algebra; sophomore standing; 2.750 GPA; in the 35th hour, and concurrent enrollment in CI 271.

272. Preprofessional Field Experience. (1). Intended primarily to give prospective teachers the opportunity to consider seriously their suitability for a career in education. In addition, students begin to develop skills in observing educational situations and settings which help them develop a teacher perspective, seeing schools as prospective work places and teachers as colleagues. Graded S/U only. Prerequisites: C or better in English I and II, Communication, and College Algebra; sophomore standing; 2.750 GPA; in the 35th hour, and concurrent enrollment in CI 271.

290. Directed Study. (2-3).

Upper-Division Courses

303. Clinical Field Experience: English as a Second Language (ESL) I. (1-4). Students work with an ESL specialist to learn hands-on strategies for teaching students whose native language is not English. Includes observing the interrelationship between language and culture, how to use multi-level teaching strategies, how to adapt materials, how to assess and grade a variety of language proficiency levels, and how to best utilize available people resources (bilingual paraprofessionals, parents, etc.) to maximize the performance of students among this population. Prerequisites: acceptance into the Teacher Education Program and a Professional Development Site Program.

304. Clinical Field Experience: English as a Second Language (ESL) II. (1-4). An extension of CI 303. Prerequisites: acceptance into the Teacher Education Program and a Professional Development Site Program.

305. Clinical Field Experience: Special Education I. (1-4). Students learn how special education services are delivered in public schools; gain exposure to working with special education students, including those with various disabilities; learn about special education programs and the individuals, who have been served, and the role of the teacher in the special education program. Prerequisites: acceptance into the Teacher Education Program and a Professional Development Site Program.

306. Clinical Field Experience: Special Education II. (1-4). An extension of CI 305. Prerequisites: acceptance into the Teacher Education Program and a Professional Development Site Program.
307. Clinical Field Experience: Technology I. (1-4). Students work with teachers using technology as a teaching, learning, and/or management tool; gain hands-on experience with computers (management systems, word processing, internet/e-mail, graphics); become familiar with basic terminology; and gain experience in the selection and use of appropriate commercial software to enhance the regular curriculum. Prerequisites: acceptance into the Teacher Education Program and a Professional Development Site Program.

308. Clinical Field Experience: Technology II. (1-4). An extension of CI 307. Prerequisites: acceptance into the Teacher Education Program and a Professional Development Site Program.

309. Clinical Field Experience: Developmentally Appropriate Practices I. (1-4). Students work with teachers delivering Developmentally Appropriate Practices in a classroom setting; gain exposure in assessing developmental levels, personalizing instruction (developing centers, using learning contracts, structuring multi-level lessons), and designing and implementing appropriate instruction for each level. Prerequisites: acceptance into the Teacher Education Program and a Professional Development Site Program.

310. Clinical Field Experience: Developmentally Appropriate Practices II. (1-4). An extension of CI 309. Prerequisites: acceptance into the Teacher Education Program and a Professional Development Site Program.

311. Block 1 Field Experience. (1). Provides students with experiences in socio-cultural school and classroom observations, observations of and work in special education settings, alternative schools and tutorial work with individuals or small group settings. Graded S/U only. Prerequisites: acceptance into teacher education, CI 301 and 302 and concurrent enrollment in CI 320 and 430 and CESP 334.

312. Block 2 Field Experience. (1). Focuses on pupils' learning behaviors, methods of assessment, measurement, grading, curriculum goals and content as they influence classroom teaching, and teachers' methods of classroom management and instruction. Graded S/U only. Prerequisites: acceptance into teacher education, CI 311, 320 and 430, CESP 334 and concurrent enrollment in CESP 433 and CI 328.

316. Children's Literature. (3). Students examine literature suitable for use with children in the preschool and elementary grades. Includes reading and examination of a wide selection of children's literature in all genres. Students develop evaluative techniques for identifying materials and practice in the use of selection aids. Prerequisite: acceptance into teacher education.

320. The Exceptional Child. (2). Surveys the characteristics of exceptional learners including: mental retardation, learning disabilities, emotional disturbances, physical challenges, hearing/visual impairments, and gifted. Also explores the effect of cultural differences and human development on disabilities. Presents service delivery models and current special education practices. Prerequisites: admission to teacher education, CI 271 and 272; concurrent enrollment in CI 311.

322. Instructional Strategies in Language Arts and Reading: Elementary School. (3). Students in CI 311 and 328 and CESP 433 who have had instruction in the subject areas of language arts and reading and practice teach their subjects in a variety of settings. Prerequisites: acceptance into teacher education, CI 311, 316, 320, 430; CESP 334; completion of or concurrent enrollment in CI 328 and CESP 433; concurrent enrollment in CI 413 for a practicum experience.

325. Curriculum, Instruction and Management. (5). Students examine the nature, purposes, and development of curriculum in educational settings. They develop a knowledge and understanding of various curriculum models and how these models influence instruction and the work of teachers.

326. Curriculum, Instruction and Management. (5). Students examine and learn to use various classroom management strategies in order to maintain control, promote a positive learning climate, and facilitate the achievement of instructional objectives. Prerequisites: acceptance into teacher education, CI 311, 320, 430; CESP 334; concurrent enrollment in CESP 433 and CI 312.

402. Instructional Strategies in Math and Science: Elementary School. (5). Students examine the content and methods of instruction in their subject area and teach their subject in a variety of elementary school settings. Prerequisites: CI 312 and 328, CESP 433, Math. 501, and a physical and/or biological science class.

406. Instructional Strategies in Social Studies: Elementary School. (3). Students examine objectives, methods of teaching, equipment and resources, and evaluation and measurement in the social studies in the elementary school. Stresses the unit method of instruction. Requires a 15 clock hour (class time) field experience in the schools during normal school hours. Prerequisites: acceptance into teacher education and CI 311.

413. Presudent Teaching. (1-3). This field experience allows students to spend an extended length of time in an appropriate classroom where they work closely with a cooperating teacher to plan and implement instruction designed to teach distinct objectives and evaluate learning outcomes. They also evaluate their own instruction, noting strengths and weaknesses and planning for improvement. Graded S/U only. Prerequisites: acceptance into teacher education, CI 312 and 328 and CESP 433, or concurrent enrollment in these courses.

427. Philosophy and History of Education. (2). Presents the major contemporary educational philosophies, the development of American education, and the historical influences on the structure of schools today. Some emphasis on the students' examination of their own educational philosophy. Prerequisite: entrance into teacher education, CI 271 and 272.

430. Social/Multicultural Education. (3). Examines the social and multicultural foundations of education and schools in a changing society. In addition students develop an appreciation for the changing ethnic and cultural characteristics of American schools. Prerequisites: acceptance into teacher education, CI 311 and 320 and CESP 334.

446. Student Teaching Seminar: Elementary. (1). Students study and discuss experiences emerging from student teaching including the planning of school programs and assuming the responsibilities of a teacher. Graded Cr/NC only. Prerequisites: acceptance into teacher education, CI 322, 402, 406; concurrent enrollment in CI 447 and 457.

447. Student Teaching in the Elementary School. (8-15). The primary purpose of student teaching field experience is to provide evidence of the preservice teacher's readiness to engage in independent reflective practice as a certified teacher. Working with one or more cooperating teachers in the schools, preservice teachers gradually assume responsibility for instructing a full complement of classes, including a full schedule for at least 10 days. Prerequisites: acceptance into teacher education; CI 322, 402, 406; concurrent enrollment in CI 446 and 457.

The student teaching seminar is required of all students working toward a degree certificate in education. Every student wishing to receive the certificate must file an application, available in 151 Corbin, with the certification office. Application for the fall semester must be filed by February 1 and for spring semester by September 1. The only exception to the required number of semester hours is the transfer student who has taken student teaching elsewhere, or students who hold other certificates who may have taught a number of years. Any deviations from established grade point averages and other regulations must be approved by the College of Education's Standards Committee.

448. Student Teaching in Early Childhood. (4-6). This field experience provides half-time participation in the preschool (three- and four-year-olds) under guidance of a master teacher and a college supervisor. Prerequisites CI 322, 402 and 406 and nine semester hours of early childhood education. Prerequisites may be waived for equivalent experience with departmental consent. See CI 447 for deadlines for filing an application to enroll in student teaching.


452. Special Studies in Education. (1-3). Primarily for elementary and secondary education majors. Repeatable with advisor's consent.
Instructional Strategies: Secondary. (3). (E) English; (F) Foreign Language; (J) Social Studies; (M) Mathematics; (S) Science. Students examine the content and methods of instruction in their subject area and teach their subject in a variety of settings. In addition, students are provided with the understanding of the development of learning and reading skills and explore instructional approaches for guiding secondary students in those skills and their use in content areas. Prerequisites: acceptance into teacher education, CI 312 and 328, CESP 433, and concurrent enrollment in CI 413.

Student Teaching Seminar: Secondary. (1). Prerequisites: acceptance into teacher education, CI 312 and 328, CESP 433; 2,500 GPA in the major, and concurrent enrollment in CI 457 and student teaching seminar.

Student Teaching: Secondary English. (8-15). Prerequisites: acceptance into teacher education, CI 413 and 454, 2,500 GPA in the major, and concurrent enrollment in instructional strategies, CI 457, and student teaching seminar.

Student Teaching: Secondary Foreign Language. (8). Prerequisites: acceptance into teacher education, CI 312, 328, CESP 433; 2,500 GPA in the major, and concurrent enrollment in CI 413 and student teaching seminar.

Student Teaching: Secondary Social Studies. (8-15). Prerequisites: acceptance into teacher education, CI 413 and 454, 2,500 GPA in the major, and concurrent enrollment in CI 457 and student teaching seminar.

Student Teaching: Secondary Science. (8-15). Prerequisites: acceptance into teacher education, CI 413 and 454, 2,500 GPA in the major, and concurrent enrollment in CI 457 and student teaching seminar.

Student Teaching: Secondary Music. (4). Prerequisites: acceptance into teacher education, methods in the subject area, CI 312 and 328, CESP 433, 2,500 GPA in the major, and concurrent enrollment in CI 457 and student teaching seminar.

Student Teaching: Secondary Art. (4). Prerequisites: acceptance into teacher education, CI 312 and 328, CESP 433, 2,500 GPA in the major, and concurrent enrollment in CI 457 and student teaching seminar.

Student Teaching: Secondary Social Studies. (8). Prerequisites: acceptance into teacher education, CI 312 and 328, CESP 433; 2,500 GPA in the major, and concurrent enrollment in CI 457 and student teaching seminar.

Student Teaching: Secondary Mathematics. (8-15). Prerequisites: acceptance into teacher education, CI 413 and 454, 2,500 GPA in the major, and concurrent enrollment in CI 457 and student teaching seminar.

Student Teaching: Secondary English. (8-15). Prerequisites: acceptance into teacher education, CI 413 and 454, 2,500 GPA in the major, and concurrent enrollment in CI 457 and student teaching seminar.

Student Teaching: Secondary Social Studies. (8-15). Prerequisites: acceptance into teacher education, CI 413 and 454, 2,500 GPA in the major, and concurrent enrollment in CI 457 and student teaching seminar.

Student Teaching: Secondary Science. (8-15). Prerequisites: acceptance into teacher education, CI 413 and 454, 2,500 GPA in the major, and concurrent enrollment in CI 457 and student teaching seminar.

Cooperative Education. (1-8). Provides the student a work-related placement that integrates theory with a planned and supervised professional experience designed to complement and enhance the student's academic program. Prerequisites: successful completion of 24 credit hours and a 2,500 GPA. Repeatable for credit. Offered Cr/Ncry.

Individual Studies in Education. (1-3).

Courses for Graduate/Undergraduate Credit

Professional Writing for Educators. (1-3). Helps students learn the writing skills, techniques, and typical procedures required for developing manuscripts for possible publication in the field of education. Addresses manuscripts for a variety of publication outlets.

Instructional Strategies: Kindergarten. (3). Students examine the content and methods of instruction in kindergarten and observe and teach in a variety of settings. Students examine all aspects of the kindergarten program and are introduced to a wide variety of materials available and in use. Prerequisites: acceptance into teacher education, CI 328, CESP 433.

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 solution. Discusses type design, harmony, legibility, copy fitting, and layout fundamentals.

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.

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 second-year students in those strategies and their use in content areas.

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.

Instructional Strategies: Middle Level Education. (3). Students examine the middle school as an organization that takes its design specifically from the analysis of 10-14 year olds, their characteristics, and their needs. Students examine many curricular and instructional alternatives for middle grades education and learn to manage changes.

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.

Introduction to Exceptional Children. (3). A survey of the characteristics of exceptional learners, including the handicapped and the gifted. Presents service delivery models and current practices. Fulfills certification requirements for teachers and serves as an introductory course in exceptionality for special education majors, administrators, and school psychologists. Prerequisite: bachelor's degree or departmental consent.

Learning Centers. (3). Students consider a variety of alternative approaches to teaching at all grade levels and subject matter areas via learning centers.

Introduction to the Reading and Writing Process. (3). Examine all aspects of current theories and pertinent research on reading and writing. Stresses applying this information to the actual teaching of children.

Reflective Inquiry into Learning, Teaching, and Schools. (3). 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 of individualized research topics. Prerequisites: admission to graduate school, CESP 701.
707. Introduction to Mildly Handicapped. (3). Examine the roles and responsibilities of special educators and become acquainted with issues and challenges confronting special educators. Also examine alternative approaches to the delivery of special education services and with the social systems within which special education services are provided. Prerequisite: acceptance into the MED, special education for mildly handicapped program.

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.

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.

710. Current Topics in Classroom Management. (1-3). Addresses a broad range of topical issues in current classroom management practices. A current issue will be covered under this course number, an umbrella number for a variety of topics/innovations in classroom management. Repeatable.

711. 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.

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.

713. Agriculture in the Classroom. (2). K-12 teachers learn about agriculture and develop ways to integrate that information into their everyday teaching. Includes presentations, field trips, and projects showing how the food chain industry touches every person's life. Teachers learn to integrate agricultural information into existing teaching basic subjects like math, language arts, social studies, science, art.

717. The Ethnography of Schooling. (3). Through readings, guided experiences in research and field work, graduate students become familiar with qualitative research approaches in education, emphasizing case study methodology and expertise in non-participant and participant observation, constant comparative analysis, and reporting research. Prerequisite: admission to Graduate School.

722. Analysis and Management of Behavior. (3). Covers behavior management strategies specifically needed by classroom teachers to affect academic and social outcomes. Addresses theoretical, technical, and practical aspects of applied behavior analysis. Prerequisites: CI 320 or 702 and CI 430 or 711 or equivalent.

724. Methods I: Academic and Cognitive Skills, Mild Exceptionalities. (3). Introduces students to specific techniques for improving the cognitive skills and academic performance of students with mild exceptionalities (learning disabilities, emotional disturbances/behavior disorders, or mental retardation). Includes competencies for (a) teaching readiness, cognitive, and academic skills as well as content to students with exceptional learning needs; (b) basing instructional decisions on data; (c) determining where to begin instruction for students with special needs; (d) instructional management and monitoring strategies; and (e) strategies for working with students with exceptional learning needs in general and special education settings. Prerequisites: CI 320 or 702, CI 430 or 711, admission to the Teacher Education Program or to the graduate program in special education as a non-degree seeking student, or instructor's consent.

725. Improvement of Instruction in Science. (3). Students identify and explore the principles of science that teachers should recognize, understand, and consider from K-9. Prerequisite: CI 402.

731. The Reflective and Inquiring Educator. (3). This integrated course builds a foundation for reflective thinking about educational issues and learning research principles that can be used to collect and analyze the success or failure of potential solutions. Prerequisite: admission to MED in Curriculum and Instruction.

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.

735. Introduction to the Gifted. (3). Students are introduced to the historical and socio-educational perspectives germane to gifted education. 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 are explored. Prerequisite: graduate standing.

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.

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) regular 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 320 or 702, CI 740, admission to the Teacher Education Program or to the Special Ed graduate program as a non-degree student, or instructor's consent.

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 753U, ENGL 676.

750. Workshops in Education. (1-4).

751, 752, 753, or 754. Special Studies in Education. (1-3). For elementary and secondary school teachers. Repeatable with advisor's consent. Prerequisite: teacher certification or departmental consent.

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.

761. Early Childhood Education. (3). Students examine programs, problems, and philosophy of educating children in the preschool years.

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.

763. Teacher/Child Relations. (3). Students develop skills for effective communication with children from birth to age eight, emphasizing helping the child build a positive self-image and a positive relationship with others.

764. Day-Care Services. (3). Students gain insight into instructional methods and operational procedures for day-care center workers.

770M. Introduction to Macintosh Computing. (2). Provides basic Macintosh skills appropriate for classroom use. Covers mouse skills, desktop menu, managing documents and folders, managing floppy and hard disks, and simple word and data processing. Teachers with little or no experience on a Macintosh should enroll in this workshop before taking instructional Applications workshops or courses. Graded S/U.
770P. Introduction to PC Computing. (2). Provides basic PC computing skills appropriate for classroom use. Includes basic commands, operating systems, managing documents and files, managing floppy and hard disks, basic word processing, and database skills. Teachers who need to know how to use and manage a PC computer should complete this course before enrolling in higher level courses and workshops.

771. Technology in the Classroom. (2). Introduces classroom teachers to new technologies and their use in the classroom. Uses field trips and speakers to expose teachers to leaders in specific technology. Includes telecommunications, multimedia applications, integrated media, and new hardware and operating systems. Prerequisite: CI 770M or CI 770P or instructor's consent.

772M. Macintosh in the Classroom. (3). A comprehensive introduction to a wide range of instructional applications of the Macintosh computer and related technology. Covers basic management techniques such as gradebooks, database manipulation, and data collection and transmission; development of instructional materials in print, on screen, and with hypermedia; appropriate application of CD-ROM and laser disc technology; and types and evaluation of educational software. Prerequisite: CI 770M or department consent.

772P. PCs in the Classroom. (3). A comprehensive introduction to a wide range of instructional applications of the PC computer and related technology. Covers basic management techniques such as gradebooks, database manipulation, and data collection and transmission; development of instructional materials in print, on screen, and with hypermedia; appropriate application of CD-ROM and laser disc technology; and types and evaluation of educational software. Prerequisite: CI 770P or department consent.

780C. Computers and the Young Child. (1). Learn to use the computer with children in preschool through second grade. Appropriate software is evaluated and used in planning for instruction. Prerequisite: CI 770 or instructor's consent.

780L. Computers in 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 for instruction. Prerequisite: CI 770 or instructor's consent.

780M. Computers in the Math Classroom. (1). Focuses on the integration of software programs designed for middle and high school mathematics classrooms. Explores software and instructional activities which support math at the middle and high school levels using Apple IIe and Macintosh systems. Prerequisite: CI 770 or instructor's consent.

780S. Computers in Science. (2). Introduces classroom teachers to the application of computer technology, CD-ROM, and laser disc technology in the science curriculum. Appropriate software is evaluated and used in planning for instruction. Prerequisite: CI 770 or instructor's consent.

781. Co-Op Education. (1-4). Provides the student a work-related placement that integrates theory with a planned and supervised professional experience designed to complement and enhance the student's academic program.

782. Internet for Educators. (2). Learn how to access and use Internet as an instructional tool. Includes modems, e-mail, World Wide Web, file transfer protocol, newsgroups, and listservs. Covers shareware software and commercial software for both PC and Mac platforms. Emphasizes the instructional impact of the resources and potential application in the classroom. Prerequisite: CI 770M or 770P.

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 770M or 770P and CI 782 or instructor's consent.

784. Classroom Research in Curriculum and Instruction. (6). This integrated class guides students in using classroom research principles to collect, analyze, interpret, and report data to develop solutions for curriculum, instruction, and student issues. Prerequisite: successful completion of CI 781.

807. Philosophy, History, and Psychology of Secondary and Elementary Education. (3). Students survey of concepts of mind, learning, experience, and knowledge, and philosophical, historical, and psychological systems and theories as they relate to current professional problems and practices. Prerequisite: CI 701.

808. Sociology of Education. (3). Students explore the relationship between education and society. Prerequisite: CI 701.

809. Foundations and Characteristics of Mild Exceptionalities. (5). Introduces students to the principles, concepts, and historical foundations underlying the provision of services for students with mild exceptionalities. Explains 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 430 or 711, CI 723 and 724, and full admission to the MEd program in special education; or instructor's consent.

810. Methods II: Social Skills for Mild Exceptionalities. (3). Provides the knowledge and skills necessary to teach social skills and affective education to children and youth with exceptionalities. Prerequisites: full admission to the graduate program, CI 723, 724, 809, and 887. Permission from the instructor for majors in other master's degree programs.

811. Family and Professional Collaboration. (3). Assists the special educator in developing the skills to collaborate and consult with parents, siblings, regular educators, support personnel, and community agencies to facilitate the needs of children with exceptionalities. Prerequisites: full admission to the graduate program, CI 723, 724, 809, and 887. Permission from the instructor for majors in other master's degree programs.

812. Transition Across the Life Span. (3). 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 setting, (b) elementary to middle school, (c) middle school to high school, (d) one special education setting to another (e.g., self-contained classroom to resource room or general education classroom), and (e) high school to post-secondary settings and independent functioning. Discusses roles of individuals with exceptional learning needs, parents, educators, and community personnel. Prerequisites: CI 809, full admission to the MEd program in special education; or instructor's consent.

821. Classroom Reading Practicum. (3). Students participate in a practicum experience, delivering developmental and corrective reading instruction in a classroom setting. Prerequisite: CI 705.
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. Prerequisite: admission to MEd in Curriculum and Instruction program, CESP 701.

837. Collaborating and Refining Problem-Solving Skills. (6). 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.

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: C1 or 702, C1 740, full admission to the MEd in special education program, or instructor's consent.

843. The Professional Educator and Portfolio. (6).
This integrated course emphasizes the application of professional behavior, classroom research skills, communication/presentation skills, and reflection. A professional portfolio documenting the attainment of the MEd in Curriculum and Instruction program's goals will be completed and presented to a faculty committee.

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.

847A. Practicum/Internship in Early Childhood Special Education. (1-10).
Provides students with participation in a class for early childhood special education, individualizing and planning instruction for children with 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, CI 723, 724, 809, and 887.

847E. Practicum/Internship in Learning Disabilities. (1-10).
See CI 847A, including prerequisites.

847H. Practicum in Center-Based/Home-Based Early Childhood Handicapped (ECH). (3).
Provides opportunities for the student to develop clinical competencies with handicapped young children and their parents under the supervision of trained professionals in the field and while working in the center and the homes of the client children. Prerequisites: CI 740, 847K, CDS 815 or C1 760 and departmental consent.

847L. Practicum/Internship in Educable Mentally Handicapped. (1-10).
See CI 847A, including prerequisites.

847K. Practicum/Internship in Behavior Disorders. (1-10).
See CI 847A, including prerequisites.

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.

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.

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.

854. Improvement of Instruction in Social Studies. (3).
Students examine recent changes in social studies curriculum and instruction to investigate strengths and limitations of various approaches. Stresses competency in teaching for concept development, dealing with value-laden issues, and teaching for inquiry. An inquiry-centered learning environment emphasizes personalizing the social studies curriculum for children. Alternative teaching strategies and complementary evaluative techniques are reviewed and practiced.

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 710.

856. Improvement of Instruction in Mathematics. (3).
Students examine recent trends in subject matter content and teaching guides to improve understanding of meanings, vocabulary, and mathematical concepts. Includes instructional methods and materials.

859A-M. Seminars in Curriculum and Instruction. (1-3).
Seminars deal with current issues, topics, and problems in curriculum and instruction. Seminars engage students actively in the conduct or reading of scholarly and/or research related to the topic, with stress on the development of students' skills in research, development, and scholarship. The focus and nature of the intensely skill development are clearly identified in the description of each seminar. A maximum of two hours can be applied to the MEd in Curriculum and Instruction. Prerequisites: admission to MEd in Curriculum and Instruction program, CI 706, CESP 701.

861. Seminar in Special Education Research. (1).
Development and presentation of research proposal. Prerequisite: admission to MEd in Curriculum and Instruction, CI 706, CESP 701.

862. Professional Portfolio Development. (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.

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

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.

Students complete their research proposal that was accepted by their thesis committee. Also required is the completion and oral defense of the student's thesis. Students work closely with their advisor and committee. Students needing an additional semester to satisfy these requirements should enroll in CI 876. Students receive credit for course(s) when their thesis has been completed and defended. Prerequisite: CI 860.

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.

887. Assessment and Analysis of the Learner. (3).
Students learn the application of standardized and informal evaluation techniques including critical evaluation of standardized tests and their appropriateness for special populations (including school-age individuals with exceptionalities and reading disabilities as well as young children and culturally and
linguistically diverse learners), and alternative methods of assessment and intervention techniques based on diagnostic profiles. Prerequisites: CI 320 or 702, 430 or 711, 723 and 724, full admission to the MEd program in special education, or instructor's consent.

888. Methods: Mildly Handicapped. (3). Students master specified competencies in teaching special students including use of data based instruction; strategies for reading assessment; techniques to improve reading, math, and written language skills; and strategies for working with other teachers to facilitate mainstreaming of special students. Prerequisites: CI 707 and acceptance into the MEd, special education for mildly handicapped program.

894. Advanced Topics in Early Childhood Handicapped. (1-4). Students participate in topical seminars in early intervention offered periodicaly to facilitate opportunities for the in-depth study of critical issues or topical research in this rapidly developing field. Prerequisites: CI 740, 761, 762, 847R, 887, and 892 or instructor's consent. Repeatable for credit.

Health and Physical Education

Physical Education Teacher Preparation

Students majoring in physical education/K-12 teacher preparation must meet the general education requirements, the professional education requirements of the College of Education, and the physical education major requirements. This program provides students a scientific and practical background upon which to base teaching content and methods. The program addresses the importance of implementing sound curricula for children of all ages. Graduates qualify for Kansas teacher certification in physical education (K-12).

All students majoring in health or physical education must meet the College of Education entrance requirements. Teacher education majors also must meet the entrance requirements for teacher preparation. Program sheets listing all requirements in the various programs may be obtained from the College of Education.

Physical Education Field Option

Students majoring in physical education/field option may select one of the approved options: exercise science or sport administration. Students must complete the general education requirements and the field option major requirements. The option in exercise science prepares students to help people of all ages and abilities (youth, disabled, elderly, and/or sports enthusiasts) reach their fitness goals. Graduates are well prepared for the American College of Sports Medicine Fitness Leaders Certification Test. Graduates work in a variety of settings such as corporate, commercial, and hospital fitness programs; YMCA/YWCA programs; and community-based programs. The sport administration option allows students to take a combined curriculum in physical education and business. Career opportunities are available in clubs, resorts, professional teams, athletic organizations, and sport governance organizations.

Certifications

State certification in Health Education is available through a program which provides an endorsement to teach K-12 health. This course of study includes knowledge of the base and practical experiences necessary so the graduate can provide a comprehensive health education program in the school setting.

Minor in Exercise Science

The exercise science minor consists of 23 credit hours including the following courses: PE 201E, PE 328, PE 331, PE 440, PE 470, PE 530, HS 331Q, and a prerequisite course in Anatomy and Physiology. This program prepares you for careers in the fitness industry and for certification exams.

Minor in Sport Administration

The sport administration minor consists of 18 credit hours including the following courses: PE 525, 560, 565, Mkt. 300, and two of the following three courses PE 475, 520, and 544. This program prepares you for careers in the athletic/sport industry.

Service Program

Physical education activity courses carry one hour of credit. They fall into nine areas.

Physical Education Activity Courses.

101. Team Activities. (1).
102. Individual Activities. (1).
103. Combatives. (1).
105. Gymnastics. (1).
106. Fitness Activities. (1).
108. Combined Activities. (1).
110. Varsity Activities. (1).

Activity courses in the service program may be repeated for credit. Students should consult their college requirements to ascertain whether the activity credits will count in a specific program.

Lower-Division Courses

111. Foundations in Physical Education, Sport, and Fitness. (3). Introduction to the history, principles, philosophy, and foundations of physical education with concomitant outgrowths for modern society.

115. Personal and Community Health. (3). Introductory course to study the multiple dimensions of personal health and the outside forces that shape health, lifestyle, disease, aging, death, and dying. Responsibilities for one's health is fostered through the use of wellness inventories, lifestyle assessments, nutritional analyses, and goal-setting.

117. Community First Aid and Community CPR. (2). Community first aid and community cardiopulmonary resuscitation with certification by the American Red Cross.

125. Health/Wellness Concepts. (1). Teaches health and wellness concepts to promote living a positive, healthy life. Covers behavior-change theory to maximize the chances that behavior changes stimulated during the class will be come permanent.

150. Workshop. (1-3).

152. Special Studies in Health, Physical Education, and Recreation. (1-3). Group study activities in prespecified areas of health, physical education, or recreation. Repeatable for credit with departmental consent. Prerequisite: departmental consent.

201A. Introduction to Activities. (2). Introduces the major student to the basic skills of badminton, tennis, and basketball.

201B. Introduction to Activities. (2). Introduces the major student to the basic skills of golf, bowling, and archery.

201C. Introduction to Activities. (2). Introduces the major student to the basic skills of softball, volleyball, and activities for middle school.

201D. Introduction to Activities. (2). Introduces the major student to the basic skills of soccer, basketball, and fitness activities.

201E. Introduction to Fitness Activities. (2). Introduction to activities appropriate for fitness/wellness programs. Prerequisite: departmental major or departmental consent.

201F. Introduction to Gymnastics. (2). Basic skill development, teaching techniques, and progression appropriate for K-12 grades in gymnastic activities.

229. Applied Human Anatomy. (3). Study of the structure and function of the skeletal and muscular systems of the human body with direct application to body movements in physical activities.

270. Motor Learning. (3). The introduction and examination of the physiological and psychological factors that affect the acquisition of motor skills.

280G. Fitness for Life. (2). 1R; 2L. The whys and hows behind activities designed to develop and maintain the muscular and cardiorespiratory systems of the human body. Two days per week are spent in a laboratory situation to assess fitness components and participate in an
individually designed fitness program. One day per week involves a lecture to enhance understanding of exercise, weight control, cardiovascular disease, and fitness parameters.

Upper-Division Courses

306. Water Safety Instructor. (2). 1R; 2L. Meets American Red Cross standards for certification in Emergency Water Safety and Water Safety Instructor Training. Student must show proficiency at the American Red Cross swimmer level within three weeks after enrollment. Prerequisite: PE 107A or departmental consent.

310. Methods in Physical Education. (3). Presentation and participation in methods of teaching physical education, emphasizing techniques, skills, organization of activities, and classroom procedures. Prerequisites: PE 270 and 201A, B, C, D; admission to teacher education block, and completion of Preprofessional Block.

311. Methods and Techniques I. (3). Methods, techniques, teaching progression, analysis, and skill development of badminton, tennis, flag football, golf, bowling, and archery. Requires 30 hours of field experiences and observation in selected high schools. Prerequisite: Block I of teacher education program.

312. Methods and Techniques II. (3). Methods, techniques, teaching progression, analysis, and skill development of softball, volleyball, soccer, basketball, fitness activities, and activities for middle school. Requires 30 hours of field experiences and observation in selected middle schools. Prerequisite: Block I of teacher education program.

326. Physical Education in the Primary Grades. (3). 3R; 2L. Second in the series for an emphasis in elementary school physical education. Focuses on developmental movement activities for children in grades K-2. Includes 15 hours of laboratory experiences with primary school children. Prerequisite: Block I of teacher education program.

327. Physical Education in the Intermediate Grades. (3). 3R; 2L. Final course in the series for an emphasis in elementary school physical education. Assists students in developing the necessary skills to teach physical education in grades 3-6. Includes 15 hours in laboratory experiences with intermediate grade school children. Prerequisite: Block I of teacher education program.

328. Kinesiology and Biomechanics. (3). The understanding of the kinesthetics and mechanics of human motion with respect to performance of sport activities. Prerequisite: PE 229 or equivalent.

331. Care and Prevention of Athletic Injuries. (3). For prospective coaches, athletic trainers, health and physical educators—to aid in the recognition, evaluation, and care of athletic injuries. Techniques in taping, prevention, and rehabilitation of injuries. Prerequisite: PE 229 or equivalent.


337. Theory and Organization of Track and Field. (2). The theory, organization, responsibilities, and techniques of coaching track and field.


340. Adaptive Physical Education. (3). Assists students in developing the necessary skills for the implementation of enjoyable physical activity into the lives of persons impaired, disabled, or handicapped. In addition to classroom work, students participate in at least two hours per week in observations and physical activity with persons impaired, disabled, or handicapped. Prerequisite: PE 229 or equivalent; admission to teacher education block, and completion of Preprofessional Block.


431. Rehabilitation and Therapeutic Modality Use for Athletic Injuries. (3). Principles in planning and implementing rehabilitation programs for injured athletes, emphasizing application of contemporary therapeutic exercise techniques. Advanced study of the use of hydrotherapeutic and electrotherapeutic agents in the rehabilitation of athletic injuries; use and application of various modalities in the treatment of athletic injuries.


440. Concepts in the Prescription of Exercise. (3). An introduction of techniques appropriate for screening, health appraisal, and fitness assessment as required for prescribing exercise programs for persons without disease or with controlled disease, and provision for practical experience in a supervised setting outside the class. Prerequisite: PE 201E and 530 or equivalent.

449. Student Teaching—Elementary Health. (13). Prerequisites: completion of all courses in major field and completion of Block III of teacher education program.

460. Practicum—Sports Business. (3). Integrate course work with planned and supervised professional experiences for a minimum of 15 hours per week. Prerequisites: 2.5 GPA, junior standing, and admission to College of Education.

470. Fitness Practicum. (3). Application of the theory to practice by assisting in campus fitness classes and the Human Performance Lab a minimum of 15 hours per week. Not repeatable. Prerequisites: PE 117, 201E, 530; a 2.5 GPA; or departmental consent.

471. Student Teaching—Physical Education—Secondary. (4). Prerequisite: completion of all courses in major field and Block III of teacher education program.

472. Student Teaching—Physical Education—Elementary. (4). Application for student teaching must be made to the coordinator of laboratory experiences prior to the semester in which the student intends to enroll. The assignment for student teaching begins with the opening of the public schools, and the student is expected to follow the public school calendar for a semester. Prerequisite: completion of all classes in the major field and Block III of teacher education program.

473. Student Teaching Seminar. (1). Weekly seminar evaluates strategies for managing classrooms and assesses instructional strategies. Students also discuss the employment process and the requirements for their certification. Prerequisite: concurrent enrollment in PE 471 and 472.

475. Sport in American Culture. (3). Develops an understanding of sport in the American culture, including how sport interacts with other facets of society (e.g., politics, economics, societal subcultures, ethics, socialization processes).

481. Cooperative Education. (4). Allows students to participate in the Cooperative Education program. Offered CR/NC only. Prerequisites: 2.50 GPA and admission to College of Education.

Courses for Graduate/Undergraduate Credit

500. Health Education K-12. (3). Provides practical applications of theoretical models of change for the health field. Discusses health problems, strategies for affecting change, and outcome measures. Develops selected instructional materials. Two field trips to selected local health agencies. Additional projects required for graduate students. Prerequisites: Block I of teacher education program.

502. Applied Health I. (2). Introduction to public health problems and practices. Field excursions are arranged. Prerequisite: departmental consent.

504. Applied Health II. (2). Intensive study of selected health problems with regard to illness prevention and the present state of world health. Prerequisite: PE 502 or departmental consent.

515. Rhythmic Activities. (2). Teaches methodology and curricular content of rhythmic activities appropriate for elementary and middle school children. Prerequisites: Block I of teacher education program.

520. Sport Tournament and Event Management. (3). A detailed account of the structural designs, mathematical calculations, scheduling
principles, procedures, and thought processes involved in the organizing and conducting of sport tournaments and events.

525. Sport Facility Management. (3). Focuses on various aspects of facility management, such as mission development, funding and budget, site selection/planning/design, floor surfaces, risk management, equipment purchase and maintenance, and personnel management.

530. Physiology of Exercise. (3). SR; 1L. Provides a working knowledge of human physiology as it relates to exercise. Prerequisite: PE 229 or equivalent.

533. Measurement and Evaluation in Physical Education. (3). A study of the modern practices utilized in the total evaluation of physical education programs including (1) basic statistical procedures, (2) evaluating students, (3) evaluating teaching, and (4) a survey of measurement tools. Prerequisite: PE 111 and 201A or B or E.

540. Seminar in Sport Business. (3). Integrates the knowledge base of sport and business as they apply in the practical setting. Prerequisites: 2.5 GPA, admission to College of Education, PE 460, and senior standing.

544. Organization and Administration of Physical Education Programs. (3). The organizational and administrative problems of physical education programs and the management of the physical plant.

547A. Internship in Sport Administration. (8). Culminating activity for students in sport administration. Students spend the equivalent of full-time employment in the appropriate agency for a total of at least 520 hours. Prerequisites: PE 460 (when applicable), 2.500 GPA overall and in major, senior standing in College of Education, advisor's approval.

547B. Internship in Sport Administration. (8). Second internship experience for students in sport administration; takes place in a different setting than PE 547A. Students spend the equivalent of full-time employment in the appropriate agency for a total of at least 520 hours. Prerequisites: PE 547A, 2.500 GPA overall and in major, senior standing in College of Education, advisor's approval.

557. Internship in Fitness/Wellness (3). Culminating activity for students in the fitness field option specialization. Students spend the equivalent of full-time employment in the appropriate agency for one full semester. Prerequisites: senior standing, departmental consent, PE 470, 2.500 minimum GPA overall and for major, admission to College of Education.

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.

565. Marketing Sport 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: Mkt 300.

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

705. Wellness in the Fitness Setting. (3). Introduces topics in the field of health/wellness promotion; presents methods of implementing health/wellness programs; focuses on issues addressing the management of a health/wellness program. Prerequisites: senior standing, full standing in the Graduate School, or instructor's consent.

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.

732. Introduction to ECC's. (3). Develops a foundation in electrocardiography. Includes ECG leads, rhythm, ECG complexes and intervals, conduction disturbances, arrhythmias, ECG identification of myocardial infarction location, and drug effects on an ECG. Prerequisites: PE 530 and senior standing, full standing in the Graduate School, or instructor's consent.

750. Workshop in Education. (1-4).

752. Special Studies in Health, Physical Education, and Recreation. (1-3). Group study in a preselected area of health, physical education, or recreation. Repeatable for credit with departmental consent. Prerequisite: departmental consent.

760. Sport in Society. (3). Impact of sports on American culture, with focus on competition, economics, mythology, education, religion, ethics, professional sports, sports and minorities.


781. Cooperative Education Field Study. (1-8). 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 repeatable for credit with a limit of eight hours counting toward the graduate degree. Offered Cr/NCr only.

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, and training and performance of the adolescent athlete and of the elderly, and the differences in performance and training between genders. Prerequisite: PE 530 or 630.

Courses for Graduate Students Only

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

801. Leadership and Management in Sport. (3). Initial introduction into the administration of sports in public schools, institutions of higher education, and sports organizations. Learn about the various components of sport administration by reading appropriate materials and entering into dialogue with practicing administrators.

812. Advanced Techniques in Physical Education. (3). Comprehensive coverage of selected physical activities, emphasizing class procedures. Includes laboratory experiences.

814. Analysis of Teaching. (3). An in-depth examination of teacher effectiveness. Includes analysis 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.

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: PE 530 or equivalent and graduate standing.

816. Physical Education in Secondary Schools. (3). For the physical education specialist. New concepts and recent trends in methodology, programming, and supervision at the secondary level.

825. Physical Education in Elementary Schools. (3). For the elementary teacher and physical education specialist.

830. Advanced Physiology of Exercise. (3). In-depth study into the physiological basis of exercise. Includes energy metabolism, respiratory dynamics, cardiovascular function, and regulation during rest, steady state and exhaustive physical activity. Emphasizes immediate and long term adaptation to exercise and training. Prerequisite: PE 550.

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.

847. Internship. (6). Internship in selected areas of specialization in exercise science or sport management. Prerequisite: departmental consent.
875. Internship in Exercise Science/Wellness. (6). Internship in selected area of specialization within the exercise science/wellness program. Students spend the equivalent of full-time employment in the appropriate agency for one full semester. Prerequisite: departmental consent.

876. 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.

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 two. Prerequisite: admission to graduate school in good standing, PE 860, and departmental consent.

890. Problems in Health, Physical Education, and Recreation. (0-4). Directed reading and research under supervision of a graduate instructor.

The following abbreviations are used in the course descriptions: R stands for lecture and L for laboratory. For example, 4R, 2L means four hours of lecture and two hours of lab.
College of Engineering

William J. Wilhelm, PhD, Dean
Modern technological developments in engineering have brought about considerable change in the College of Engineering’s curriculum at Wichita State University. The curriculum provides a vigorous, challenging experience through a broad spectrum of fundamental technical knowledge as well as courses in humanities, social sciences, communications, mathematics and physical sciences. This balance in the curriculum prepares students for professional positions in the scientific-industrial community after the advanced study.

The College of Engineering is organized into four degree-granting departments: aerospace, electrical and computer, industrial and manufacturing, and mechanical.

The programs in engineering are offered in daytime and evening classes, and the courses are the same whether they are taught in the day or at night.

Degrees Offered

Undergraduate

The Bachelor of Science degree programs in aerospace, electrical, industrial, and mechanical engineering are accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET). Two new programs leading to the Bachelor of Science in manufacturing engineering and in computer engineering, which are not presently accredited by EAC/ABET, are also offered.

Graduate

A Master of Science (MS) is offered in aerospace, electrical, industrial, and mechanical engineering. A new Master of Engineering Management program is offered in the industrial and manufacturing engineering department. A Doctor of Philosophy (PhD) also is offered by each of the four departments of engineering.

Typical fields of specialization include aerodynamics, fluid mechanics, propulsion, structures, solid mechanics, composites, dynamics, and control; communication theory, signal processing, control theory, digital systems, energy, and power systems; thermodynamics, heat transfer, engineering materials, engineering design, kinematics; and operations research, management science, manufacturing processes, and human factors.

See the Wichita State University Graduate Bulletin for more information about the graduate programs.

Policies

Admission

All entering students with a declared interest in engineering will be admitted to the pre-degree program in the College of Engineering. The pre-degree program of study must include the following courses: (a) Eng. 101/100, Eng. 102, and Comm. 111, (b) Math. 242Q, and (c) Phys. 313Q or Chem. 111Q, or their equivalents.

Students will be admitted to an engineering degree program when they have satisfied the following requirements:

1. Completion of at least 24 semester credit hours of college-level work with a WSU grade point average of 2.000 or higher, and an overall grade point average of 2.000 or higher (for transfer students). The 24 semester hours must include the above-specified courses in the pre-degree program, each with a grade of C or better;

2. Declaration of a specific engineering major.

Students may not continue in the pre-degree program after the semester in which they complete 48 semester hours.

Probation

Students are placed on academic probation if any of the following grade point averages is less than 2.000 and if they have attempted at least 6 hours in that grade point average at Wichita State University: (1) cumulative grade point average of all college/university work, (2) WSU grade point average and (3) engineering major grade point average.

Attempted hours are defined as all hours appearing on the transcript with a grade of A, B, C, D, F, W, Cr, NCr, I, S, or U.

Academic probation is not removed until all grade point averages are at least 2.000.

Transfer students admitted on probation must complete at least 12 semester hours of credit work at Wichita State before probation may be removed.

Students on academic probation may not enroll for more than 12 semester hours in a 16-week term, six semester hours in an eight-week term, or three hours in a four-week term. Exceptions to these limitations may be made on the recommendation of the student’s department advisor with the approval of the student’s department chairperson.

Academic Dismissal

Students on academic probation are subject to academic dismissal from the College of Engineering if they fail to attain a cumulative WSU grade point average of 2.000 in the next 12 hours attempted, or a cumulative major grade point average of 2.000 in the next nine hours attempted in their major field, and the grade point average for the most recent semester or Summer Session is below 2.000.

Academic Advising and Enrollment

Students in the College of Engineering are invited to seek academic advice from their advisors or the department chairs any time during the school year. Engineering students are strongly urged to preregister for courses during published preregistration dates to avoid closed classes. Late registration or adding engineering courses will be allowed only during the first week of a regular semester or the first three days of a Summer Session.

Students in the College of Engineering may not enroll in more than 20 hours per semester during the academic year. Summer Session enrollments are limited to a maximum of five hours for each four-week session or ten hours during the eight-week session. Students who have completed at least 24 hours at WSU with a WSU grade point average of 3.000 or higher may petition their department chairperson for permission to enroll in excess hours.

Students who are employed full or part time should, in consultation with their academic advisor, reduce their enrollments to a level appropriate to their work load.

Only students admitted to the College of Engineering or the Graduate School will be allowed to enroll in engineering courses at the 300 level or above. Because there are legitimate reasons for qualified nonengineering students to enroll in an engineering course at the 300 level or
above, the academic dean will consider petitions for exceptions to the preceding statement.

Transfer Credit
Students wishing to receive transfer credits for engineering courses taken at other institutions prior to admission to WSU must submit transcripts and course descriptions and syllabi to the College of Engineering for evaluation. Courses considered for transfer credit must have a grade of C or better.

Degree-bound WSU students should speak with an advisor before enrolling in courses at another institution.

Graduation Requirements
All engineering students who are pursuing bachelor's degrees must meet three sets of course requirements for graduation: (A) WSU General Education requirements, (B) College of Engineering requirements, and (C) the Accreditation Board for Engineering and Technology (ABET) requirements. Guidelines for these are given below:

WSU General Education Requirements
(1) Communications skills courses: All WSU students must complete three courses in communication skills; English 101 or 100 (for non-native speakers), English 102, and Communication 111, each with a grade of C or better. All engineering students must complete these three courses before they can be transferred to a degree program in engineering.

(2) Four Introductory courses in the disciplines, to include: one course each in the divisions of Fine Arts, Humanities, and Social and Behavioral Sciences, and an additional course in a different discipline in either Humanities or Social and Behavioral Sciences.

(3) Two additional courses that are not Introductory. One is to be a Further Study course in one of the disciplines in the division in which two Introductory courses are taken. The second additional course is to be an Issues and Perspectives course in a different division.

All WSU students also must complete courses in the division of Natural Science and Mathematics; however, because the engineering curriculum requires 34-36 hours of mathematics and natural sciences, engineering students automatically satisfy the requirements in this division.

Refer to the section on the General Education Program in this Catalog for a description of the Introductory courses, Further Study courses, and Issues and Perspectives courses.

College of Engineering Requirements
(1) Mathematics and Natural Sciences: 34-36 hours of mathematics and natural sciences must be completed, as prescribed by each department. Included is a natural science elective of three or four hours to be chosen from an approved list available from the college.

(2) Core requirements (13 hours): Engr. 310, Seminar in Engineering (0 hrs.); AE 223, Statics (3 hrs.); ECE 282, Circuits I (4 hrs.); IEN 255, Engineering Economy (3 hrs.); and ME 398, Thermodynamics (3 hrs.). These are courses that all engineering students must complete, regardless of major.

(3) Department requirements: Each department has specific courses that must be completed. These courses and their prerequisites are in the departmental sections of the Catalog and are listed on the department check sheets.

(4) Technical electives: Additional courses required, but not specified, by the department. Each should be chosen in consultation with a department advisor.

ABET Requirements
ABET expects the curricular content of an engineering program to include the equivalent of at least three years of study in the areas of mathematics, basic sciences, humanities and social sciences, and engineering topics. The course work must include at least: (1) one year (34 hours) of an appropriate combination of mathematics beyond trigonometry and basic sciences, (2) one-half year (17 hours) of humanities and social sciences, and (3) one and one-half years (51 hours) of engineering topics.

Studies in basic sciences must include both general chemistry and calculus-based general physics at appropriate levels, with at least a two-semester sequence of study in either area. The courses in humanities and social sciences must provide both breadth and depth and not be limited to a selection of unrelated introductory courses. Engineering topics include subjects in the engineering sciences and engineering design.

All engineering students follow about the same general curriculum for the first two years. All engineering programs of study are designed to meet ABET criteria as well as satisfy WSU general education requirements, and all courses should be selected with the assistance of a College of Engineering advisor. The recommended sequence of courses for engineering students in all departments is outlined later in this section. Each sequence has been planned so that students can complete the program to meet all requirements in the minimum time.

As part of the institutional effort required to ensure continuous accreditation by ABET, students taking longer than five years to complete an undergraduate degree will be required to meet ABET engineering curricular criteria in effect at the time of their graduation.

Students must file an application for degree card in the engineering dean's office two semesters preceding their final semester.

Graduation grade point average requirements: The candidate for a degree must attain a 2.000 grade point average in each of the following categories:

(1) All college and university work attempted (cumulative grade point average)

(2) All work attempted at WSU (WSU grade point average)

(3) All work in the student's major.

Students are not allowed credit toward graduation for D grade work in excess of one-quarter of their total hours.

Cooperative Education Program
The College of Engineering offers a cooperative education program in conjunction with the University Cooperative Education program described in this Catalog. The co-op plan is a voluntary program in which the student works part-time (parallel program) or alternates paid preprofessional work periods with classroom periods during the junior and senior years. The two most typical plans are illustrated in the following table.

<table>
<thead>
<tr>
<th>Year</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester</td>
<td>F  S  Su</td>
<td>F  S  Su</td>
<td>F  S</td>
</tr>
<tr>
<td>Plan A</td>
<td>WC W</td>
<td>WC W</td>
<td>C  C</td>
</tr>
<tr>
<td>Plan B</td>
<td>C  WC</td>
<td>WC W</td>
<td>C  C</td>
</tr>
<tr>
<td>C Indicates in college</td>
<td>W Indicates at work</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

These plans make it possible for each industrial position to be filled by two students, one from Plan A and one from Plan B. Other plans can be developed in cooperation with the coordinator.

To be eligible for the co-op program, a student must demonstrate by academic performance during the freshman year the potential to complete the degree program satisfactorily. Generally this means the earning of a grade point average of 2.500 or higher. Also the student's charac-
Engineering—

General Education

The following courses explore general engineering topics.

Lower-Division Courses

**101. An Introduction to Engineering.** (3).
Assists engineering students in exploring engineering careers and opportunities. Provides information on academic and life skills essential to becoming a successful engineering student. Promotes connections to specific engineering majors and provides activities to assist and reinforce the decision to major in engineering. Recommended for all new engineering students. Offered fall and spring.

Upper-Division Courses

**310. Seminar in Engineering.** (0). Seminars on the practice of engineering, including ethics and professionalism. Each College of Engineering student is required to attend four seminars. Graded Cr/InCr only. Prerequisite: admission to the College of Engineering.

Aerospace Engineering

Aerospace engineering students participate in an academic program of study in technical areas such as aerodynamics performance, propulsion, flight dynamics and control, and structures. After developing a background of skills in these technical areas, senior students complete a two course sequence in aerospace design.

The aerospace engineering curriculum also gives students the opportunity to develop a comprehensive foundation in mathematics, physics, general engineering, digital computation, written and oral communications, and humanities and social sciences.

Students have access to an excellent array of laboratory facilities including six wind tunnels, a water tunnel, a computer lab, a structural testing lab, and a composite structures lab. These facilities are among the finest found in academic institutions.

The aircraft industries in Wichita include The Boeing Company, Cessna Aircraft Company, Learjet Corporation, and Raytheon Aircraft. The presence of these companies has a strong positive influence on WSU's aerospace engineering program.

Bachelor of Science Degree in Aerospace Engineering

**Sequence of Courses**

The undergraduate program requires the completion of 125 semester hours for graduation, minus advanced placement credit and plus Engr. 310. The suggested course of study for aerospace engineering students is given in the following table.

**Model Program**

**Freshman**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engr. 101 or 100 and 102, College English I and II</td>
<td>6</td>
</tr>
<tr>
<td>Chem. 111Q, General Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>Math. 242Q and 243, Calculus I and II</td>
<td>10</td>
</tr>
<tr>
<td>Phys. 313Q and 315Q, University Physics I and Lab</td>
<td>5</td>
</tr>
<tr>
<td>IEN 222, Engineering Graphics</td>
<td>3</td>
</tr>
<tr>
<td>AE 227, Engineering Digital Computation</td>
<td>2</td>
</tr>
</tbody>
</table>

**Sophomore**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comm. 111, Public Speaking</td>
<td>3</td>
</tr>
<tr>
<td>Math. 344, Calculus III</td>
<td>3</td>
</tr>
<tr>
<td>Math. 555, Ordinary Differential Equations with Linear Algebra</td>
<td>4</td>
</tr>
<tr>
<td>Phys. 314Q, University Physics II</td>
<td>4</td>
</tr>
<tr>
<td>AE 223, Statics</td>
<td>3</td>
</tr>
<tr>
<td>AE 324, Fundamentals of Atmospheric Flight</td>
<td>3</td>
</tr>
<tr>
<td>AE 333, Mechanics of Materials</td>
<td>3</td>
</tr>
<tr>
<td>AE 373, Dynamics</td>
<td>3</td>
</tr>
<tr>
<td>ME 398, Thermodynamics</td>
<td>3</td>
</tr>
<tr>
<td>Engr. 310, Seminar in Engineering</td>
<td>3</td>
</tr>
<tr>
<td>Humanities and fine arts or social and behavioral sciences electives</td>
<td>6</td>
</tr>
</tbody>
</table>

**Junior**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ME 250, Materials Engineering</td>
<td>3</td>
</tr>
<tr>
<td>ME 521, Fluid Mechanics</td>
<td>3</td>
</tr>
<tr>
<td>AE 424, Aerodynamic Theory</td>
<td>4</td>
</tr>
<tr>
<td>AE 502, Aerospace Propulsion I</td>
<td>3</td>
</tr>
<tr>
<td>AE 514, Flight Mechanics and Controls</td>
<td>3</td>
</tr>
<tr>
<td>AE 525 and 625, Flight Structures I and II</td>
<td>6</td>
</tr>
<tr>
<td>AE 615, Introduction to Space Dynamics</td>
<td>3</td>
</tr>
<tr>
<td>Humanities and fine arts or social and behavioral sciences electives</td>
<td>6</td>
</tr>
</tbody>
</table>

**Senior**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>AE 512, Experimental Methods in Aerodynamics</td>
<td>2</td>
</tr>
<tr>
<td>AE 607, Flight Control Systems</td>
<td>3</td>
</tr>
<tr>
<td>IEN 255, Engineering Economy</td>
<td>3</td>
</tr>
<tr>
<td>ECE 282, Circuits I</td>
<td>4</td>
</tr>
<tr>
<td>AE 528 and 628, Airspace Design I and II</td>
<td>8</td>
</tr>
<tr>
<td>Natural sciences elective*</td>
<td>3</td>
</tr>
<tr>
<td>Humanities and fine arts or social and behavioral sciences electives**</td>
<td>6</td>
</tr>
<tr>
<td>Technical electives</td>
<td>9</td>
</tr>
</tbody>
</table>

*To be chosen from a list of approved courses available from the college.

**Refer to graduation requirements at the beginning of this section for details.

Lower-Division Courses

**115. Introduction to Astronautics.** (1). An introduction and overview of astronautics. Historical, technical, and practical aspects of rocketry, space dynamics, spacecraft design, and the space environment. Intended for freshmen and sophomore AE students who have not taken AE 324, however, it may be taken by students at any level in other engineering departments or colleges.

**124. Introduction to Aeronautics.** (2). An introduction and overview of aeronautics. Historical and modern case studies used to survey the aerodynamic, structural, stability, and propulsion aspects of atmospheric flight vehicles. Intended for freshmen and sophomore AE students who have not taken AE 324, however, it may be taken by students at any level in other engineering departments or colleges.

**223. Statics.** (3). The study of the condition of equilibrium of rigid bodies under the action of forces. Rigid bodies include beams, trusses, frames, and machines. Considers both two and three dimensional bodies. Also includes the study of centroids, centers of gravity, and moments of inertia. Corequisites: Math. 243 and Phys. 313Q.

**227. Engineering Digital Computation.** (2).


**281A. Co-op Education.** (1). Introduces the student to engineering practice by working in industry in an engineering-related job and provides a planned professional experience designed to complement and enhance the student's academic program. Individualized programs must be formulated in consultation with, and approved by, appropriate faculty sponsors and cooperative education coordinators. Intended for students who will be working full time on their co-op assignment and need not be enrolled in any other course. May be repeated. Offered Cr/InCr only. Prerequisites: 30 hours toward a bachelor of science in aerospace engineering degree and approval by appropriate faculty sponsor.


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. Prerequisite: AE 514.


Introduction to Space Dynamics. (3). Fundamentals of three-dimensional and orbital mechanics; orbital maneuvers, earth satellite operations and interplanetary trajectories; rigid body dynamics and spacecraft attitude control. Prerequisite: AE 227 and 373.

Flight Structures II. (3). Strength analysis and design of flight vehicle components. Introduction to energy methods and variational principles. Application of finite element method to the analysis of flight vehicle structures. Special projects in structural analysis and design. Prerequisite: AE 525.

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.

Advanced Aerodynamics Laboratory. (3). 1R. 3L. Advanced topics in wind tunnel testing including analysis and sensitivity, modeling techniques, flexure design and calibration, control surface loads and moments, laser velocimetry, hot film anemometry, dynamic signal processing, flow measurement probes, flow visualization using smoke tunnels and water tunnel. Prerequisite: AE 512 or instructor's consent.

Introduction to Aerelasticity (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, flutter, buffet, dynamic response to rapidly applied periodic forces, aerelastic effects on load distribution and static and dynamic stability. Prerequisite: AE 333, 424 or equivalent.

Advanced Flight Dynamics I. (3). Review of the equations of motion for aircraft. Nonlin-
ear effects and aircraft response. Stability and control of elastic aircraft. Response to turbulence. Prerequisite: AE 514 or instructor’s consent.

715. Space Dynamics I. (3). Advanced trajectory analysis methods and attitude acquisition techniques. Prerequisite: AE 373.

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 420, AE 424, ME 521 or equivalent.

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.


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. Use Airy stress functions to obtain solutions. Introduces energy principles and variational methods. Prerequisite: instructor’s consent.


737. Mechanics of Damage Tolerance. (3). An introduction to the mechanics of damage tolerance with emphasis on stress analysis-oriented fracture mechanics. Topics include stress intensity, fracture toughness, residual strength, fatigue crack growth rate, fatigue crack propagation, and damage tolerance concepts. Prerequisites: AE 525 or instructor’s consent.


753. Mechanics of Fiber Composites. (3). Classical laminate theory, failure theories, hygrothermal behavior. Other topics from fatigue, fracture toughness, damage tolerance, interlaminar stresses, flexure, buckling and vibration. Prerequisite: AE 525 or instructor’s consent.

760. Selected Topics. (1-3). Prerequisite: instructor’s consent.


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 multidegree freedom systems. Introduces continuous systems. Prerequisites: Math. 555, AE 373 and 333.

Courses for Graduate Students Only


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

814. Advanced Flight Dynamics II. (3). Sensitivity analyses of flight parameters; control surface sizing; handling qualities; pilot in-the-loop analyses; trajectory optimization. Prerequisite: AE 714.

815. Space Dynamics II. (3). Missile and interplanetary trajectories, orbital perturbations, attitude control methods and atmospheric reentry. Prerequisite: AE 715 or equivalent.

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.


822. Finite Element Analysis of Structures. (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.

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.


860. Selected Topics. (1-3). Prerequisite: instructor’s consent.

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

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 oral presentation on the project. Graded S/U only. Prerequisite: consent of academic advisor.

890. Independent Study. (1-3). Arranged individual study in special areas of aerospace engineering under the supervision of a faculty member. Graded S/U only. Prerequisite: consent of supervising faculty member.

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.

913. Aerodynamics of Aeroelasticity. (3). A study of thin airfoils and finite wings in steady flow and thin airfoils oscillating in incompressible flow. Includes extension to compressible and three-dimensional airfoils and modern methods for low aspect ratio lifting surfaces. Prerequisites: AE 711 and 777 or instructor’s consent.

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. Prerequisites: AE 719 or ME 588.

936. Theory of Plasticity. (3). Includes criteria of yielding, plastic strain-stress relationships, and stress and deformation in thick-walled shells, rotating discs and cylinders, bending and torsion of prismatic bars for ideally plastic and strain-hardening materials. Includes two- and three-dimensional problems including fracture deformation and variational and extremal principles. Prerequisite: AE 731.

960. Advanced Selected Topics. (1-3). Prerequisite: instructor’s consent.

The Electrical and Computer Engineering department offers two undergraduate degree programs, one in electrical engineering and the other in computer engineering. The two undergraduate degree programs differ by a maximum of 31 credit hours. Both degrees can be earned with a minimum of 20 additional hours if care is taken in selecting technical electives.

In both degree programs emphasis is placed on the intensive study of mathematics and physical laws appropriate to the study of electrical and electronic components used in the design of electrical and computer systems. The electrical engineering curriculum has 25 credit hours of technical electives to be chosen (with some restrictions) by the student, allowing the student to concentrate their study in communications, signal processing, control systems, electric power systems, electronics, and digital systems. The computer engineering curriculum has fewer technical electives since it is focused toward software and hardware associated with computer systems.

### Bachelor of Science Degree in Electrical or Computer Engineering

As part of both curriculums, senior-level students are required to take a senior project of their own choosing under the supervision of a faculty member. The choice of subject material varies and represents a challenge in judgment and creativity in design. The computer engineering degree has an additional requirement of a senior lab where students are required to design complex digital systems and test them with sophisticated test equipment. Both degrees require the completion of 132 semester hours for graduation, minus hours commensurate with advanced placement credit plus Engr. 310. Specific requirements and a suggested academic year breakdown for degrees are given in the following tables.

#### Model Program—Electrical Engineering

**Freshman**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Math. 111, Introduction to Electrical Engineering</td>
<td>3</td>
</tr>
<tr>
<td>ECE 282, Circuits I</td>
<td>4</td>
</tr>
<tr>
<td>ECE 194, Introduction to Digital Design</td>
<td>4</td>
</tr>
<tr>
<td>ECE 229, Engineering Computing in C</td>
<td>3</td>
</tr>
</tbody>
</table>

**Sophomore**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chem. 111Q, General Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>Math. 344, Calculus III</td>
<td>3</td>
</tr>
<tr>
<td>Math. 555, Ordinary Differential Equations with Linear Algebra</td>
<td>4</td>
</tr>
<tr>
<td>Physics 314Q, University Physics II</td>
<td>4</td>
</tr>
<tr>
<td>AE 223, Statics</td>
<td>3</td>
</tr>
<tr>
<td>ECE 284, Circuits II</td>
<td>3</td>
</tr>
<tr>
<td>ECE 525, Engineering Probability and Statistics</td>
<td>3</td>
</tr>
<tr>
<td>ECE 310, Seminar in Engineering</td>
<td>0</td>
</tr>
<tr>
<td>Humanities and fine arts or social and behavioral sciences electives</td>
<td>6</td>
</tr>
</tbody>
</table>

**Junior**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECE 363, Electromagnetic Field Theory</td>
<td>3</td>
</tr>
<tr>
<td>ECE 383, Signals and Systems</td>
<td>3</td>
</tr>
<tr>
<td>ECE 488, Electric Machines and Transformers</td>
<td>4</td>
</tr>
<tr>
<td>ECE 492, Electronic Circuits I</td>
<td>3</td>
</tr>
<tr>
<td>ECE 525, Engineering Probability and Statistics</td>
<td>3</td>
</tr>
<tr>
<td>Natural science electives</td>
<td>3</td>
</tr>
<tr>
<td>Humanities and fine arts or social and behavioral sciences electives</td>
<td>6</td>
</tr>
</tbody>
</table>

**Senior**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECE 493, Electronic Circuits II</td>
<td>4</td>
</tr>
<tr>
<td>ECE 585 and 595, Electrical Design Project I and II</td>
<td>4</td>
</tr>
<tr>
<td>Technical electives**</td>
<td>19</td>
</tr>
<tr>
<td>Humanities and fine arts or social and behavioral sciences electives**</td>
<td>3</td>
</tr>
</tbody>
</table>

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* Refer to graduation requirements at the beginning of this section for details.

** The following requirements concern technical electives.

1. In every case the program of engineering courses must include 33 hours of engineering science and 17 hours of engineering design. The student is responsible for selecting these requirements.
2. A minimum of 16 credit hours must be taken within the electrical engineering department.
3. Two electrical engineering courses with a laboratory component are required. § To be chosen from a list of approved courses available from the college.

#### Model Program—Computer Engineering

**Freshman**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engl. 110/100 and 102, College English I and II</td>
<td>6</td>
</tr>
<tr>
<td>Math. 242Q and 243, Calculus I and II</td>
<td>10</td>
</tr>
<tr>
<td>Phys. 313Q, University Physics I</td>
<td>4</td>
</tr>
</tbody>
</table>

**Sophomore**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Math. 344, Calculus III</td>
<td>3</td>
</tr>
<tr>
<td>Math. 555, Ordinary Differential Equations with Linear Algebra</td>
<td>4</td>
</tr>
<tr>
<td>Physics 314Q, University Physics II</td>
<td>4</td>
</tr>
<tr>
<td>AE 223, Statics</td>
<td>3</td>
</tr>
<tr>
<td>ECE 284, Circuits II</td>
<td>3</td>
</tr>
<tr>
<td>ECE 525, Engineering Probability and Statistics</td>
<td>3</td>
</tr>
<tr>
<td>ECE 310, Seminar in Engineering</td>
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<tr>
<td>Humanities and fine arts or social and behavioral sciences electives</td>
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</table>

**Junior**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECE 363, Electromagnetic Field Theory</td>
<td>3</td>
</tr>
<tr>
<td>ECE 383, Signals and Systems</td>
<td>3</td>
</tr>
<tr>
<td>ECE 488, Electric Machines and Transformers</td>
<td>4</td>
</tr>
<tr>
<td>ECE 492, Electronic Circuits I</td>
<td>3</td>
</tr>
<tr>
<td>ECE 525, Engineering Probability and Statistics</td>
<td>3</td>
</tr>
<tr>
<td>Natural science electives</td>
<td>3</td>
</tr>
<tr>
<td>Humanities and fine arts or social and behavioral sciences electives</td>
<td>6</td>
</tr>
</tbody>
</table>

**Senior**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECE 493, Electronic Circuits II</td>
<td>4</td>
</tr>
<tr>
<td>ECE 585 and 595, Electrical Design Project I and II</td>
<td>4</td>
</tr>
<tr>
<td>Technical electives**</td>
<td>19</td>
</tr>
<tr>
<td>Humanities and fine arts or social and behavioral sciences electives**</td>
<td>3</td>
</tr>
</tbody>
</table>

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* Refer to graduation requirements at the beginning of this section for details.

** To be chosen with your advisor's approval. In every case the program of engineering courses must include 33 hours of engineering science and 17 hours of engineering design. The student is responsible for selecting these requirements.

§ To be chosen from a list of approved courses available from the college.

#### Lower-Division Courses

101. Introduction to Electrical Engineering. (O). Gives those students also enrolled in Engr.
101 the opportunity for a hands-on experience in each of the areas of specialization in electrical engineering: digital design, power, communications, and control.

150. Workshop on Electrical and Computer Engineering. (1-3). Workshops on electrical and computer engineering are offered on an irregular basis. Prerequisite: departmental consent.

194. Introduction to Digital Design. (4). 3R; 3L. An introduction to digital design concepts. Includes number systems, Boolean algebra, Karnaugh maps, combinational circuit design, adders, multiplexers, decoders, sequential circuit design, state diagram, flip-flops, sequence detectors, and test different combinational and sequential circuits. Uses CAD tools for circuit simulation. Prerequisite: Math. 111 or equivalent.

229. Engineering Computing in C. (3). Introductory course in digital computer programming using C with applications to elementary engineering problems. Stresses both C syntax rules and problem solving approaches. Laboratory exercises given for programming on personal computers. Prerequisite: Math. 111 or 112.

238. Assembly Language Programming for Engineers. (3). An introduction to basic concepts of computer organization and operation. Studies machine and assembly language programming concepts that illustrate basic principles and techniques. Laboratory exercises given for experience using personal computers. Prerequisite: Math. 111 or 112 and ECE 229.


284. Circuits II. (3) Includes circuits with mutually coupled elements, transfer functions emphasizing frequency response, signal networks, Laplace transformations and application to transient circuit analysis and the application of computer aided analysis software toward circuit analysis and design. Prerequisites: ECE 229 or AE 257, ECE 282, Math. 243.

294. Digital Design Techniques. (3). Digital design techniques include registers and register transfer language, RTL state design. Memory, memory interfacing and microprogramming. Programmable logic devices, different types of PLDs, combinational and sequential circuit design using PLDs, ABEL, CMOS family. TTL to CMOS and CMOS to TTL interfacing. Uses CAD tools for circuit simulation. Prerequisite: ECE 194.

333. Signals and Systems. (3). Properties of signals and systems, convolution and its representation to system response, Fourier series representation of periodic signals, Fourier transforms and continuous systems, filters, time domain, sampling, and Z-transforms. Many of these topics involve discrete as well as continuous systems. Prerequisite: Math. 555. Corequisite: ECE 284.

394. Introduction to Computer Architecture. (3). Introduces memory systems, arithmetic circuits, computer architecture, assembly languages, and microprogramming design. Prerequisite: ECE 294.

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

481A, Co-op Education. (1). Provides the student the opportunity to obtain practice in application of engineering principles by employment in an engineering-related job integrated with the coursework and supervised professional experience. Individualized programs must be formulated in consultation with, and approved by, appropriate faculty sponsors and cooperative education coordinators. Intended for students who will be working full-time on their co-op assignment and need not be enrolled in any other course. Offered Credit/No Credit only. Prerequisites: Junior standing and approval by appropriate faculty sponsor.

481P, Co-op Education. (1). Provides the student the opportunity to obtain practice in application of engineering principles by employment in an engineering-related job integrated with the coursework and supervised professional experience. Individualized programs must be formulated in consultation with, and approved by, appropriate faculty sponsors and cooperative education coordinators. Students must enroll concurrently in a minimum of 20 hours per week at their co-op assignment. Offered Credit/No Credit only. Prerequisites: Junior standing and approval by appropriate faculty sponsor.

488. Electric Machines and Transformers. (4). 3R; 3L. Theory and analysis of transformers, DC machines, and AC machines. Includes single phase and three phase transformers, DC machines, synchronous and induction motors. Prerequisite: ECE 282 or departmental consent.

492. Electronic Circuits I. (3). Introduces semiconductor devices and applications in discrete and integrated circuit design. Applications include basic circuitry, transistor operation, and amplifier circuits. Prerequisites: ECE 282 and Math. 243.


Courses for Graduate/Undergraduate Credit

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


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

594. Microprocessor Based System Design. (3). Development of microprocessor based system presented. Interfacing the address bus, data bus, and control bus to the processor chip studied. 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. Prerequisites: ECE 238 and 294, or 394.

595. Electrical Design Project II. (2). 3L. May not be counted toward a graduate electrical major. A continuation of ECE 585. Prerequisite: ECE 383 or departmental consent.

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.

636. Telecommunications. (3). Topics in circuit and packet switching, layered communication architectures, state dependent queues, traffic engineering, call processing, software organization, routing and common channel signaling. Prerequisite: ECE 586 or departmental consent.

639. Microcontrollers. (3). A review of microprocessor architecture and assembly language programming. A detailed study of microcontroller architectures, assembly languages and peripheral devices for applications in embedded and real-time control systems. Prerequisite: ECE 258.

682. Distributed Parameter Circuits. (3). 3R; 3L. A study of the theory and applications of distributed parameter circuits with emphasis on transmission lines. Treats telegrapher's equations, transient signals on lossless lines, steady state signals on lossless lines, effects of lumped impedances, and Smith Chart techniques. Prerequisite: ECE 284.
684. Introductory Control System Concepts. (3) An introduction to system modeling and simulation, dynamic response, feedback theory, stability criteria, and compensation design. Prerequisites: ECE 284 and 383.

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-conveter 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.

691. Integrated Electronics. (3) A study of BJT and MOS analog and digital integrated circuits. Includes BJT, BiCMOS, and MOS fabrication, application specific semi-custom VLSI arrays, device performance and characteristics and integrated circuit design and applications. Prerequisites: ECE 294 and 493.

698. Principles of Power Distribution. (3). The distribution system is a vital contributor to the overall power system function of providing quality electrical service. Provides an overall view of the engineering fundamentals of distribution system. Discusses distribution system planning and automation, primary and secondary distribution networks. Presents voltage regulation, protection, and reliability. Prerequisite: ECE 488.

726. Digital Communication Systems I. (3). Presents theoretical and practical aspects of digital and data communication systems. Includes the modeling and analysis of information sources as discrete processes; basic source and channel coding; multiplexing and framing; spectral and time domain considerations related to ASK, PSK, 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.

736. Data Communication Networks. (3). Presents a quantitative performance evaluation of telecommunication networks and systems. Includes fundamental digital communications system review; packet communications; queuing theory; OSI, s25, and SNA layered architectures; station-based-routing, 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. Prerequisites: Stat. 471 and ECE 636 or departmental consent.

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 639.

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.

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 284 and 383 and Stat. 471 or 1821 or departmental consent.

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

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 493.


790. Independent Study in Electrical Engineering. (1-5). Arranged individual, independent study in specialized content areas in electrical engineering under the supervision of a faculty member. Repeatable for credit. Prerequisite: departmental consent.

792. State Variables. (3). Review of mathematical fundamentals to state-space concepts. Formulates state-variable models for linear and nonlinear continuous and discrete systems and concepts of controllability and observability. Studies adjoint systems in addition to Liapunov and Lagrange stability and computational approximation techniques. Prerequisites: ECE 284 and 383.

797. Computer Application to Power System Analysis. (3). Describes the use of power system component models and efficient computational techniques in the development of a new generation of computer programs representing the steady and dynamic states of electric power systems and informs of methods currently employed in the electric utility industry. Emphasizes algorithms suitable for computer solution of power systems problems such as power flows and system voltages during normal and emergency conditions and transient behavior of the system resulting from fault conditions and switching operations. Prerequisites: ECE 229 and 598.

798. Advanced Electric Power Systems Analysis. (3). Advanced topics in analysis and operation of electric utility power systems. Topics include faulted system analysis, economic dispatch, generator modeling, power system stability, and system protection. Prerequisite: ECE 566.

Courses for Graduate Students Only

826. Digital Communication Systems II. (3). Presents in-depth theoretical and practical digital communication systems and channels. Includes the modeling and analysis of all digital communications receiver with intermediate frequency (IF) sampling and A/D converter; synchronization techniques; trellis-coded modulation (TCM); Multiple Access; fading multipath channel; radar frequency interference (RFI) channel; and jamming channel. Applies to digital satellite communications system; and digital cellular code division multiple access (CDMA) system. Prerequisite: ECE 726.

838. Network Systems Programming I. (3). Introduction to programming in a network environment. The study of application programming interfaces (API) for the development of systems for the management and control of a local area network (LAN). Communication APIs for the IPX/SPX protocol suite will be investigated and used for the development of client/server and parallel/distributed applications. Prerequisite: ECE 728.

842. Modern Filters. (3). Concerned with estimating a signal of interest or the state of a system in the presence of additive noise, making use of the statistical characteristics of both the signal and the noise. Course includes Wiener filters, Kalman filters, linear prediction, and algorithms for linear prediction parameter estimation. Prerequisite: ECE 754.


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 or 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 (LSL) filters. All are adaptive and self-designing. Includes concepts of convergence, tracking ability, and robustness. Prerequisite: ECE 754.

846. Spectrum Estimation. (3). Concerned with estimating the frequency spectrum, primarily power but also energy, of a signal of interest. Review historical methods, but concentrate on
modern methods that are model based, achieve high resolution even for short data lengths. Content includes modern entropy, maximum likelihood, autoregressive, moving average, and autoregressive moving average spectrum estimation methods. Applications also included. Prerequisite: ECE 754.

854. Stochastic Control Systems. (3). Reviews the pertinent aspects of deterministic system models; stochastic processes and linear dynamic system models emphasizing linear systems driven by white Gaussian noise, linear estimation and optimal filtering; design and performance analysis of Kalman filters. Prerequisites: ECE 684 and 754.

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

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.

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.

882. Speech Digital Signal Processing. (3). An introductory study in speech signal generation and digital speech signal processing. Includes speech generation and perception, acoustic phonetics, models of speech sounds and signal production, analysis methods of digital speech signals, digital representations of speech signals, short-time Fourier transforms and the application to spectrograms, pitch and formant estimation, parametric and nonparametric methods of signal representation, linear prediction methods, speech data compression, some methods of speech synthesis and recognition, and speech signals in the presence of noise. Prerequisites: ECE 754 or departmental consent.

883. Digital Filters. (3). A study of digital filter design methods. Includes both IIR and FIR filters. Discusses software and hardware implementations; introduces two-dimensional digital filters. Prerequisite: ECE 782 or departmental consent.

884. Discrete-Time Control Systems. (3). Fundamentals of input-output and state-space analysis, difference equations and state space representations; pole placement and observer design; dynamic programming and discrete minimum principle; linear state regulator design; equality-constrained control problems. Prerequisites: ECE 684 and 782.

885. Error Control Coding. (3). Presents fundamental topics from information theory which underlie source and error control coding. Reviews topics from finite field theory and vector spaces essential for the study of coding. Presents the concepts of code-space, sphere packing and perfect codes. Considers linear (n,k) block codes in some detail including error detection and correction concepts, parity check matrices and syndromes. Hamming codes, cyclic codes, error trapping decoding, BCH codes, burst-error-correcting codes, interleaving and product codes. Presents convolutional codes and topics such as the Viterbi algorithm for decoding. Prerequisites: ECE 586 and 754.

893. Optimal Control. (3). A continuation of the study of state-space concepts in the areas of nonlinear systems and optimal and suboptimal control systems with wide classes of performance measures. Prerequisite: ECE 792 or departmental consent.

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

895. Non-linear Control Theory. (3). An introduction to the analysis and design of non-linear control systems emphasizing stability. Includes stability definitions, phase-plane methods, linearization, time and frequency domain stability criteria, limit cycle criteria and exact methods for relay control systems. Prerequisites: ECE 684 and 792 or instructor's consent.

897. Operation and Control of Power Systems. (3). Acquaints 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 998.

900. 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. Prerequisite: advanced standing and departmental consent.

903. Large Scale Control Systems. (3). Sensitivity analysis of deterministic and nonrandom systems. Sources and methods 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 uncertainty 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

The industrial and manufacturing engineering (IMfE) department takes responsibility for instruction and research in design, analysis, and operation of manufacturing and other integrated systems of people, materials, equipment, and capital.

The IMfE department offers two undergraduate degree programs, one in industrial engineering (BSIE) and another in manufacturing engineering (BSMfE). The BSIE degree program is accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology (EAC/ABET). The BSMfE degree program is new and accreditation for it has not yet been sought. The department also offers three graduate degree programs: Master of Engineering Management (MEM), MS in IE, and PhD in IE. Both the MSIE and PhD programs allow specialization in engineering systems, ergonomics/human factors engineering, and manufacturing systems engineering. The MEM program is geared toward helping engineers/technologists develop planning, decision making, and managerial skills while receiving advanced technical knowledge.

Modern, well-equipped laboratories are available to supplement classroom theory in ergonomics, manufacturing engineering, and computer analysis. The IMfE department also has modern computer graphics facilities. The department's laboratory facilities include Cessna Manufacturing Processes Lab, Graphics Lab, Metrology Lab, Computer Integrated Manufacturing Lab, Automation and
Controls Lab, and Open Computing Lab. Students in the academic programs offered by the industrial and manufacturing engineering department get ample opportunity to work on real-life problems in local industries as part of course requirements.

**Bachelor of Science Degree in Industrial Engineering**

Industrial engineers apply scientific knowledge to solve problems in manufacturing and other industries, businesses, and institutions, focusing on productivity improvement through better use of human resources, financial resources, natural resources and man-made structures and equipment. IEs apply analytical, simulation, and experimental tools to design, planning, implementation, and operational problems in a wide variety of organizations such as banks, hospitals, consulting firms, transportation, construction, processing, manufacturing, electronics, social services, and government at all levels.

**Sequence of Courses**

The BS in manufacturing engineering program requires the completion of 135 semester hours plus Engr. 310 for graduation, minus hours commensurate with advanced placement credit. Students may select 12 hours of technical electives to emphasize their study of engineering systems, ergonomics, or manufacturing engineering. This allows students to specialize in a specific area of industrial engineering. Students’ programs are determined by their own interests in consultation with their faculty advisors. Specific requirements and a suggested schedule for the industrial engineering program are given in the accompanying table.

**Model Program**

**Freshman**

**Course**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Math. 111Q and 112Q, College Algebra</td>
<td>5</td>
</tr>
<tr>
<td>Math. 242Q and 243, Calculus I</td>
<td>8</td>
</tr>
<tr>
<td>AE 223, Statics</td>
<td>3</td>
</tr>
<tr>
<td>Econ. 202Q, Principles of Economics (micro)</td>
<td>3</td>
</tr>
<tr>
<td>ECE 229, Engineering Computing in C</td>
<td>3</td>
</tr>
<tr>
<td>AE 333, Mechanics of Materials</td>
<td>3</td>
</tr>
<tr>
<td>IEN 254, Engineering Probability and Statistics I</td>
<td>3</td>
</tr>
<tr>
<td>IEN 255, Engineering Economy</td>
<td>3</td>
</tr>
<tr>
<td>IEN 550, Introduction to Operations Research</td>
<td>4</td>
</tr>
<tr>
<td>Humanities, social science or fine arts electives</td>
<td>6</td>
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</table>

**Junior**

**Course**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
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</thead>
<tbody>
<tr>
<td>Math. 344, Calculus III</td>
<td>3</td>
</tr>
<tr>
<td>ECE 229, Engineering Computing in C</td>
<td>3</td>
</tr>
<tr>
<td>AE 333, Mechanics of Materials</td>
<td>3</td>
</tr>
<tr>
<td>IEN 254, Engineering Probability and Statistics I</td>
<td>3</td>
</tr>
<tr>
<td>IEN 255, Engineering Economy</td>
<td>3</td>
</tr>
<tr>
<td>IEN 550, Introduction to Operations Research</td>
<td>4</td>
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<td>Humanities, social science or fine arts electives</td>
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</tbody>
</table>

**Senior**

**Course**

<table>
<thead>
<tr>
<th>Course</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Math. 555, Ordinary Differential Equations with Linear Algebra</td>
<td>4</td>
</tr>
<tr>
<td>ECE 282, Circuits</td>
<td>4</td>
</tr>
<tr>
<td>ME 398, Thermodynamics</td>
<td>3</td>
</tr>
<tr>
<td>Engr. 310, Seminar in Engineering Design</td>
<td>3</td>
</tr>
<tr>
<td>IEN 490, Industrial Engineering</td>
<td>3</td>
</tr>
<tr>
<td>IEN 690, Industrial Engineering</td>
<td>3</td>
</tr>
<tr>
<td>Technical electives</td>
<td>3</td>
</tr>
<tr>
<td>Natural science electives</td>
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</tr>
<tr>
<td>Humanities, social science or fine arts electives</td>
<td>3</td>
</tr>
</tbody>
</table>

*Refer to the College of Engineering graduation requirements in the WSU Undergraduate Catalog for details.

**To be chosen from an approved list (a minimum of 6 hours must be taken within the MfgE department).**

**To be chosen from an approved list available from the College of Engineering.**

**Bachelor of Science Degree in Manufacturing Engineering**

Manufacturing engineering is concerned with converting raw materials and intermediate products into final and other intermediate products through the use of various design, processing, assembly, and automation techniques as well as the design and manufacturing of tools, jigs, and machines used in these processes. The strength of the BSMfgE program at Wichita State is its emphasis on the following three manufacturing engineering areas: materials and processes; product engineering and assembly; and, manufacturing quality and productivity. Manufacturing engineers can apply their broad and comprehensive skills in a wide spectrum of industries.

**Sequence of Courses**

The BS in manufacturing engineering program requires the completion of 135 semester hours plus Engr. 310 for graduation, minus hours commensurate with advanced placement credit. Students may select 12 hours of technical electives to emphasize their study of advanced manufacturing engineering concepts and related topics in other engineering disciplines. Selection of appropriate courses would allow the students to tailor their study to fit their individual interests and needs. Students’ programs of study are determined in consultation with their faculty advisors. Specific requirements and a suggested schedule for the manufacturing engineering program are given in the accompanying table.

**Model Program**

**Freshman**

**Course**

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>Math. 111Q and 112Q, College Algebra</td>
<td>5</td>
</tr>
<tr>
<td>Math. 242Q and 243, Calculus I and II</td>
<td>10</td>
</tr>
<tr>
<td>Phys. 313Q and 315Q, University Physics I and II</td>
<td>10</td>
</tr>
<tr>
<td>Chem. 111Q, General Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>Comm. 111, Public Speaking</td>
<td>3</td>
</tr>
<tr>
<td>IEN 222, Engineering Graphics</td>
<td>3</td>
</tr>
<tr>
<td>MfgE 258, Manufacturing Method I</td>
<td>3</td>
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</tbody>
</table>

**Sophomore**

**Course**

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>Math. 344, Calculus III</td>
<td>3</td>
</tr>
<tr>
<td>AE 223, Statics</td>
<td>3</td>
</tr>
<tr>
<td>ME 398, Thermodynamics I</td>
<td>3</td>
</tr>
<tr>
<td>IEN 222, Engineering Graphics</td>
<td>3</td>
</tr>
<tr>
<td>IEN 254, Engineering Probability and Statistics I</td>
<td>3</td>
</tr>
<tr>
<td>IEN 255, Engineering Economy</td>
<td>3</td>
</tr>
<tr>
<td>MfgE 558, Manufacturing Methods and Materials I</td>
<td>3</td>
</tr>
<tr>
<td>MfgE 575, Computer Aided Manufacturing</td>
<td>3</td>
</tr>
<tr>
<td>Technical electives</td>
<td>3</td>
</tr>
<tr>
<td>Humanities, social science or fine arts electives</td>
<td>6</td>
</tr>
</tbody>
</table>
Junior

Course (Hrs.)
Math. 555, Ordinary Differential Equations with Linear Algebra............ 4
AE 333, Mechanics of Materials.............................. 3
IEN 524, Engineering Probability and Statistics II....................... 3
IEN 554, Statistical Quality Control.................................. 3
IEN 664, Engineering Management.................................... 3
MgE 502, Metrology............................................. 3
MgE 645, Manufacturing Systems Engineering............................. 3
Technical electives**........................................... 6
Humanities, social science or fine arts electives*.............................. 6

Senior

Course (Hrs.)
Phys. 314Q, University Physics II............. 4
Engr. 310, Seminar in Engineering......................... 0
ECE 282, Circuits I........................................... 4
ME 439, Mechanical Engineering Design I......................... 3
MgE 590, Manufacturing Engineering Design I.......................... 3
MgE 690, Manufacturing Engineering Design II.......................... 3
Technical electives**........................................... 6
Natural science electives........................................ 3
Humanities, social science or fine arts electives*.............................. 6

*Refer to the College of Engineering graduation requirements in the WSU Undergraduate Catalog for details.

**A minimum of 6 hours must be taken within the MgE department and at least 3 hours must be from another engineering department; see a suggested list of technical electives.

Upper-Division Courses

452. Work Analysis and Design. (3). Principles and techniques of work measurement systems, methods engineering, work sampling, and predetermined time systems. Prerequisite: IEN 254 or Stat. 471.

480. Selected Topics in Industrial Engineering. (1-4). New or special course material presented upon sufficient student demand. Repeatable for credit. Prerequisite: departmental consent.

481P. Co-op Education. (1). See IEN 281P. Prerequisites: junior standing and approval by appropriate faculty sponsor.

Courses for Graduate/Undergraduate Credit


549. Industrial Ergonomics. (3). A systematic approach to the optimization of the human-task-environment system. Includes work space design, manual materials handling, cumulative trauma disorders, and environmental factors. Emphasizes applications in industry. Prerequisites: IEN 452 and 524 or departmental consent.


553. Production and Inventory Control. (3). Quantitative techniques used in the analysis and control of production systems. Includes forecasting, inventory models, operation planning and scheduling. Prerequisite: IEN 550.

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: IEN 524.

556. Information Systems. (3). A study of the design, implementation and economic analysis of computer-based information systems. Prerequisites: IEN 255 and ECE 239 or AE 227.


563. Facilities Planning and Design. (3). Quantitative and qualitative approaches to problems in facilities planning and design, emphasizing activity relationships, space requirements, materials handling and storage, layout and facilities location. Prerequisites: IEN 550 and MgE 288. Corequisite: IEN 482.

565. Systems Simulation. (3). The design of simulation models and techniques for use in designing and evaluating discrete systems, including manufacturing systems too complex to be solved analytically. Emphasizes general purpose computer simulation languages. Prerequisites: IEN 550 or equivalent and ECE 239 or AE 227. Corequisite: IEN 524.

590. Industrial Engineering Design I. (3). A design project utilizing industrial engineering principles, performed under faculty supervision, for solving practical problems. May not be counted toward a graduate industrial engineering major. May not get credit in both IEN 590 and MgE 590. Prerequisites: must be within one year of graduation and departmental consent.

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. Prerequisite: IEN 254 or Stat. 471.


690. Industrial Engineering Design II. (3). Continuation of the design project initiated in IEN 590 or the performance of a second industrial engineering design project. May not be counted toward a graduate industrial engineering major. May not get credit in both IEN 690 and MgE 690. Prerequisites: IEN 590 and department consent.

731. Foundations of Optimization. (3). An extensive treatment of the theory and concepts
of the linear, nonlinear, constrained and unconstrained optimization techniques. Prerequisite: IEN 550.

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: IEN 254 and 255.

749. Advanced Ergonomics. (3). A continuation of IEN 549. Includes principles and application of human factors to the design of the workplace, displays, control systems, hand tools and video display terminals. Prerequisite: IEN 549.

750. Industrial Engineering Workshops. (1-4). Various topics in industrial engineering. Prerequisite: departmental consent.

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: IEN 524.

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: IEN 524 or instructor's consent.


764. Systems Engineering and Analysis. (3). Presentation of system design process from the identification of a need through conceptual design, detail design and development, and system test and evaluation. Studies operational feasibility, reliability, maintainability, supportability and economic feasibility. Prerequisites IEN 254 and 255.

770. Industrial Automation. (2R; 3L). Teaches the design and application of manufacturing automated systems. Discusses automation components, such as sensors, actuators and microprocessors, along with the use of programmable logic controllers. Introduces other areas of automation, such as robotics, machine vision, DNC machine tools, and their integration into automated system. Prerequisite: ECE 239 or knowledge of a programming language.

775. Computer Integrated Manufacturing. (3). A study of the concepts, components and technologies of CIM systems, enterprise modeling for CIM, local area networks, CAD/CAM interfaces, information flow for CIM, shop floor control and justification of CIM systems. Prerequisite: IEN 239 or knowledge of a programming language.

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

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 IE. Repeatable for credit. May not be used to satisfy degree requirements. Prerequisite: departmental consent and graduate GPA of 3.00 or above. CR/NC only.

782. Assembly Design and Planning. (3). Studies various topics related to design, planning, and fabrication of mechanical assemblies. Includes joining processes, design for assembly (DFA) principles, assembly design, product modeling, product data management, assembly sequencing, and assembly tool design. Prerequisite: Mfg. E. 258 and ECE 239 or knowledge of a programming language.

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.

Courses for Graduate Students Only

835. Applied Forecasting Methods. (3). A study of the forecasting methods, including smoothing techniques, time series analysis and Box-Jenkins models. Prerequisite: IEN 524.

842. Advanced Simulation. (3). A study of advanced techniques and methods for statistically selecting input distributions for and analyzing output from simulation models. Also studies variance reduction and model validation techniques. Prerequisites: IEN 565 and 524.

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 offline and online quality engineering techniques, including cost of quality, seven old and seven new tools, Quality Function Deployment, and statistical process control methods. Explores design of engineering experiments, including Taguchi's methods. Prerequisite: IEN 524.

857. Environmental Hygiene Engineering. (3). Evaluation and control of mechanical, physical and chemical environments. Environmental factors considered include heat, cold, noise, vibration, light, pressure, acceleration, radiation and air contaminants. Prerequisite: IEN 549.


877. Foundations of Neural Networks. (3). For students from a variety of disciplines. Introduces the theory and practical applications of artificial neural networks. Covers several network paradigms, emphasizing the use of neural networks as a solution tool for industrial problems which require pattern recognition, predictive and interpretive models, pattern classification, optimization, and clustering. Presents examples and discusses them from a variety of areas including quality control, process monitoring and control, robotics control, simulation metamodeling, economic analysis models, diagnostic models, combinatorial optimization, and machine vision.

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.

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.

890. Independent Study in Industrial Engineering. (3). Analysis, research and solution of a selected problem. Prerequisite: instructor's consent.

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: IEN 550.

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: IEN 549.

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: IEN 549 and AE 223.

956. Knowledge-Based Systems. (3). Introduction to the concepts and techniques in knowledge-based systems or expert systems. Includes design and development of knowledge-based systems using microcomputer-based software. Prerequisite: ECE 239 or AE 227 or departmental consent.

960. Advanced Selected Topics. (1-3). New or special courses on advanced topics presented under this listing on sufficient demand. Prerequisite: instructor's consent.

970. Machine Vision Applications. (3). A study of machine vision techniques, such as thresholding, edge detection, boundary following, object identification and measurements using machine vision. Emphasizes the application of machine vision techniques in automated inspection and object recognition. Prerequisites: ECE 239 or knowledge of a programming language, IEN 670, or instructor's consent.
558. Manufacturing Methods and Materials II. (3). Covers the theoretical aspects of manufacturing processes, their knowledge of material treatment and its effect on manufacturing processes. In-depth study of the material removal processes and non-traditional machining. Tool wear and tool wear monitoring and unattended machining. Includes an introduction to geometric dimensioning and tolerancing. Includes laboratory experience and plant tours. Prerequisites: MfgE 258 and ME 250.

575. Computer Aided Manufacturing. (3). An introductory course in Computer Aided Manufacturing. Examines the basic principles of CAM, such as computer aided design, NC programming, CAD/CAM integration, and principles of computer aided manufacture. Prerequisites: MfgE 258 and ECE 239 or equivalent.

590. Manufacturing Engineering Design I. (3). First of two capstone design project courses utilizing manufacturing engineering principles, performed under faculty supervision, for solving practical problems. May not be count-
Chem. 111Q, General Chemistry ..........5  
Math. 242Q and 243, Calculus I and II ..........10  
Phys. 313Q and 315Q, University Physics I and II ..........5  
Comm. 111, Public Speaking ..........3  

Sophomore

Course Hrs.
Math. 344, Calculus III ..........12  
Math. 555, Ordinary Differential Equations with Linear Algebra ..........7  
Math. 242Q and 243, Calculus I and II ..........10  
Phys. 314Q, University Physics II ..........5  
AE 223, Statics ..........3  
AE 227, Engineering Digital Computations ..........2  
IEN 255, Engineering Economy ..........3  
ECE 282, Circuits I ..........4  
ME 250, Materials Engineering ..........3  
ME 251, Materials Engineering Lab ..........1  
IEN 222, Engineering Graphics ..........3  
Engr. 310, Seminar in Engineering ..........0  

Junior

Course Hrs.
AE 333, Mechanics of Materials ..........3  
AE 373, Dynamics ..........3  
ME 339, Elements of Mechanical Engineering Design ..........3  
ME 398, Thermodynamics I ..........3  
ME 402, Mechanical Engineering Measurements ..........3  
ME 439, Mechanical Engineering Design I ..........3  
ME 502, Thermodynamics II ..........3  
ME 521, Fluid Mechanics ..........3  
ME 522, Heat Transfer ..........3  
ME 523, Fluid and Heat Flow lab ..........1  

Senior

Course Hrs.
ME 503, Mechanical Engineering Laboratory ..........4  
Mechanical Design electives** ..........3  
Thermal Design electives** ..........3  
ME 659, Mechanical Control ..........3  
ME 662, Mechanical Engineering Practice ..........3  

Practice

Engineering electives§ ..........12  

Humanities and fine arts or social and behavioral sciences electives* ..........9

* Refer to graduation requirements at the beginning of this section.  
** To be chosen from a list of approved courses available from the College of Engineering.  
§ One thermal design elective and one mechanical design elective must be taken from those being offered.  

The engineering electives must meet the following requirements (12 hours required):  
1. A minimum of six hours must be selected from ME department electives.  
2. The remaining six hours can be selected either from ME department elective courses or engineering courses outside the ME department.

Lower-Division Courses

101. Introduction to Machines and Design. (2).  
(1) Students participate in a mechanical design project where they disassemble and reassemble a machine to learn how it operates and develop an understanding of mechanical devices. The knowledge and experience from the mechanical design forms the basis for an introduction to the design process. 

Courses for Graduate/Undergraduate Credit

Undergraduate required courses are normally not acceptable for graduate credit toward a degree in mechanical engineering.

Prerequisites: ME 250 and 251, AE 333, and Math. 555.

450. Selected Topics in Mechanical Engineering. (1-3). New or special topics presented on sufficient demand. Repeatable for credit when subject matter warrants. Prerequisite: department consent.

451. Technical Entrepreneurship. (3). A junior/senior level course which carries credit hours and integrates into the design process topics of technical entrepreneurship. The engineering student gains an appreciation for the business side of the marketplace. Also the student is encouraged to take the next step towards starting their own business ideas.

469. Energy Conversion. (3). Energy conversion principles and their implementation in engineering systems including thermal, mechanical, nuclear, and direct energy conversion processes. Prerequisite: ME 398.

481A. Co-op Education. (3). Introduces the student to engineering practice by working in industry in an engineering-related job and provides planned professional experience designed to complement and enhance the student's academic program. Individualized programs must be formulated in consultation with and approved by appropriate faculty sponsors and cooperative education coordinators. Intended for students who will be working part-time on their co-op assignment and need not be enrolled in any other course. Prerequisites: junior standing and approval by the appropriate faculty sponsor. May be repeated. Offered Cr/NCR only.

481P. Co-op Education. (1). Introduces the student to engineering practice by working in industry in an engineering-related job and provides planned professional experience designed to complement and enhance the student's academic program. Individualized programs must be formulated in consultation with and approved by appropriate faculty sponsors and cooperative education coordinators. Intended for students who will be working part-time on their co-op assignment and need not be enrolled in any other course. Prerequisites: junior standing and approval by the appropriate faculty sponsor. May be repeated. Offered Cr/NCR only.
503. 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 402, Engl. 102. Corequisite: ME 522.


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.

523. Fluid and Heat Flow Laboratory. (1). 3L.* Laboratory course designed to illustrate and reinforce the concepts in ME 521 and ME 522. Prerequisite: ME 521; corequisite: ME 522.

541. Mechanical Engineering Design II. (3). Applications of engineering design principles to the design of new levels 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.

550. 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.

602. Engineering for the Environment. (3). Engineering for the environment, air, water, and noise pollution, and handling of hazardous wastes. Covers briefly the main pollutants, their major sources, their effects, and their attainment levels set by the U.S. Environmental Protection Agency. Emphasizes engineering systems for pollution control. Prerequisites: ME 398, AE 223, IE 255, ECE 282, or departmental consent.


655. 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.

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

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.


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.

719. Basic Combustion Theory. (3). Introduction to the fundamental principles of combustion processes. Examines the chemistry and physics of combustion phenomena, i.e., detonation and flames, explosion and ignition processes. Prerequisites: Chem. 111Q and ME 502.

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 as well as computer simulations for different terrains. Prerequisites: ME 339, AE 373 and Math. 555.

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 manipulators and simulation, along with introduction to artificial intelligence and computer vision. Prerequisite: ME 659 or equivalent.

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.

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, various hardening and strengthening mechanisms. Concludes with discussion of physical properties and testing methods to measure these properties. Prerequisite: ME 667 or departmental consent.

876. Thesis. (1-4). Graded S/U only. Repeatable for credit toward the MS thesis option up to six hours. Prerequisite: consent of MS thesis advisor.

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.

900. Independent Study in Mechanical Engineering. (1-3). Arranged individual, independent study in specialized content areas. Prerequisite: instructor's consent.

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.

988. Computational Fluid Dynamics and Heat Transfer II. (3). Vector form of the Navier-Stokes and the energy equation. Generalized transformation of the flow equations to the computational domain. Numerical methods for inviscid flow equations, boundary layer type equations, "parabolized" Navier-Stokes equations and the Navier-Stokes equations. Prerequisite: ME 858 or equivalent.

960. Advanced Selected Topics. (1-3). New or specialized advanced topics in mechanical engineering. Prerequisite: instructor's consent.

962. Advanced Ceramics. (3). Covers concepts in ceramics science and engineering essential to understanding and using advanced ceramic materials such as high temperature metaloceramics. Expands coverage of fundamental concepts and physical properties presented in ME 860. Provides deeper understanding of crystalline solids and characteristic properties of ceramics. Incorporates many of the most recent advances in the area. Students are expected to have backgrounds in chemistry, physics, math, thermodynamics, mechanics of solids, and introduction to materials in undergraduate engineering courses.


990. Advanced Independent Study. (1-16). Arranged individual, independent study in specialized content areas. Repeatable toward the PhD degree. Prerequisites: advanced standing and instructor's consent.

The following abbreviations are used in the course descriptions; R stands for lecture and L for laboratory. For example, 4L; 2L means four hours of lecture and two hours of lab.
College of Fine Arts

Walter J. Myers, Dean

The College of Fine Arts is responsible for instruction, scholarly inquiry, performance, teacher education (excepting theatre/dance), and applied study in music, dance, theatre, and visual arts. The School of Art and Design, the School of Music, and the School of Performing Arts (Dance and Theatre) offer both general arts study and professional training programs at the undergraduate level; professional degrees are offered at the graduate level.

Students are presented with a complete spectrum of choices according to their interest in professional activities, teaching careers, graduate study, or acquiring an appreciation of the arts. They have the opportunity to explore various art forms as well as to develop their ability to respond to changes and challenges within the world of the arts. The college strives to develop and utilize new artistic techniques, current historical research, and recent technical innovations to achieve these ends.

The School of Music is an accredited member of the National Association of Schools of Music, and the Division of Dance is accredited by the National Association of Schools of Dance. Both programs adhere to requirements for entrance and graduation that accord with the associations' published criteria.

Degrees Offered

Undergraduate

The College of Fine Arts offers five undergraduate degrees: Bachelor of Arts (BA), Bachelor of Fine Arts (BFA), Bachelor of Art Education (BAE), Bachelor of Music (BM), and Bachelor of Music Education (BME). Graduation requirements for each degree are listed in the descriptions of the appropriate school programs.

Graduate

The Graduate School offers a program leading to the Master of Fine Arts (MFA) with concentrations in ceramics, painting, printmaking, and sculpture; the Master of Arts (MA) in art education and in communication/theatre; a Master of Music Education (MME) with concentrations in elementary music, instrumental music, choral music, and music in special education; and a Master of Music (MM) with concentrations in history-literature, performance, piano pedagogy, instrumental conducting, opera performance, and theory-composition.

For information concerning requirements for entrance and curricula, consult the Wichita State University Graduate Bulletin.

Special Academic Area

Cooperative Education

The College of Fine Arts participates in the University Cooperative Education program. The program is designed to provide relevant paid employment experiences that integrate with and complement the students' academic programs. Degree credit is awarded. Students are placed in a variety of positions including education and business settings in both music and art disciplines. For further information contact the fine arts coordinator in the Cooperative Education office.

Policies

Admission

All entering freshmen who declare a major within a discipline in the College of Fine Arts, or who enter as a general "undecided" student in a fine arts discipline, will be enrolled in and advised by the school that houses the discipline (Art and Design; Music; Performing Arts—Theatre and Dance). All students must maintain a grade point average of 2.000 or above to remain in good standing (see Academic Probation and Dismissal Standards, p. 16).

Transfer students must present an earned GPA of 2.000 or higher for all prior college work in order to be fully admitted into a School within the College of Fine Arts. Transfer students with a GPA of at least 1.700 but less than 2.000 may petition for probationary admission.

Probation and Dismissal

Students are expected to make satisfactory progress in their studies. A student who fails to do so may be placed on probation at any time and ultimately dismissed from the University.

Students are required to maintain an overall WSU grade point average of at least 2.000. Students enrolled in either the music education or art education programs must meet specific curriculum and GPA requirements prior to acceptance into student teaching; call or consult the Associate Dean of Students and Certification in the College of Education, (316) 978-3303.

Students who do not achieve or maintain the required 2.000 grade point average will be placed (or continued) on probation at the conclusion of each semester in which their overall WSU grade point average falls below 2.000. Students on probation are limited to a maximum of 12 credit hours per semester while on probation. Students will be dismissed at the end of the semester in which they accumulate 12 attempted credit hours with a semester and WSU grade point average below the minimum required after being placed on probation. Students are not academically dismissed at the end of a semester unless they began that semester on academic probation.

Transfer students admitted on probation must complete at least 12 semester hours with a minimum grade point average of 2.000 on work at Wichita State before probation may be lifted. If a grade point average of 2.000 is not achieved for the first attempted 12 hours of Wichita State work, transfer students admitted on probation will be dismissed from the University.

Students who have been dismissed for poor scholarship may be readmitted by the permission of the relevant school Curriculum and Policy Committee in the College of Fine Arts and by the University's Committee on Admissions and Exceptions.

General Education Requirements—For students entering fall 1995 or later

Basic Skills .........................................12
English 100 or 101, and 102 ..........................11
Communication 111
Mathematics 111 or 112 ..............................12
Fine Arts and Humanities ..........................12
One introductory course from a fine arts discipline
One introductory course from two humanities disciplines.
One further study course from the same discipline as one of the introductory courses, above, or an Issues and Perspectives course in fine arts or humanities.
Social and Behavioral Sciences ....................9
One introductory course each from two different social and behavioral science disciplines.
One further study course from the same discipline as one of the introductory courses, above, or an Issues and Perspectives course in social and behavioral science.

Natural Sciences and Mathematics .......... 9
One introductory course each from two different natural sciences and mathematics disciplines.
One further study course from the same discipline as one of the introductory courses, above, or an Issues and Perspectives course in natural sciences and mathematics.

An introductory course meets general education objectives and serves as an introduction to the discipline. A further study course is taken in a discipline once a student has completed an introductory course in the same discipline. An Issues and Perspectives course is designed as an interdisciplinary course or is intended to inform students of issues or problems from a disciplinary perspective. Students may take either a second course in a discipline represented by an introductory course or an Issues and Perspectives course from the division housing that discipline. Students must complete at least one and not more than two issues and Perspectives courses to fulfill General Education Program requirements. Courses within the student's major discipline do not count toward General Education Program requirements.

Fine Arts—General

Lower-Division Course

101. Introduction to the University. (3). An elective class which helps the entering freshman/transfer student make an easier transition to the demands and challenges of a four-year university. Includes personal assessment, time management, learning styles, career exploration, library/study/test taking skills, and campus policies/procedures and resources. Students taking this class have been shown to do better academically and enjoy their experience more, and are more likely to complete their degree.

Upper-Division Courses

>301. An Introduction to the University. (3). General education further studies course. Helps students focus on business and marketing aspects of the arts. An examination from the artist's perspective of techniques for launching a career in the arts. Gives attention to elementary concepts of marketing artistic talents, goal setting, financing, legal issues, and public demographics.

481. Cooperative Education. (1-8). A field placement which integrates course work with a planned and supervised professional experience designed to complement and enhance the student's academic program. May be repeated for credit. Prerequisite: satisfactory academic standing prior to the first job assignment.

Course for Graduate/Undergraduate Credit

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

Donald Byrum, Chair
The School of Art and Design offers four program areas: graphic design, studio arts, art history, and art education. These programs offer professional courses within the BA and BFA degrees to train and educate art and design majors. Students in academic programs other than art are encouraged to enroll in art history and studio courses to gain an understanding of art and extend their visual literacy.

The programs of study at the School of Art and Design are designed to demand from each student the self-discipline needed to expand options while pursuing a chosen direction. Many entering students have not yet identified the art discipline in which they wish to develop their strength. Others enter the school with a clear professional direction. Through structured programs which provide ample opportunity for experimentation, the school meets the needs of all its students.

During the first year of study, the Foundation curriculum will develop technical skills. These fundamental skills provide the basis for the development of understanding and creating art forms. The same professional faculty members who teach advanced art courses teach these fundamental skills.

Art students have excellent classroom and laboratory facilities in the McKnight Art Center and renovated Henrion Annex. The center provides extensive space for exhibiting student work. The Clayton Staples Gallery offers guest artist and thematic exhibits in addition to featuring BFA and MFA graduation shows.

At the Edwin A. Ulrich Museum of Art in McKnight Art Center, students can view a wide range of exhibitions and hear the variety of visiting artists and guest lecturers. The Lewis and Selma Miller Fund provides programs of regional and national interest.

Attendance
The undergraduate art and design student is expected to attend all scheduled classes and examination periods. At the discretion of the faculty member, the student may be failed in a course, or given a lowered grade, on the basis of excessive absences. In high enrollment demand classes, a student who misses the first two class meetings may be asked to drop the course. In cases of serious illness, or extended absence, the Chair of the School of Art and Design should be notified.

Supplies Charge
In addition to University fees, the School of Art and Design requires that students pay a supplies charge on a per-course basis for enrollment in certain courses where materials such as clay, plaster, or printers ink must be provided for the class rather than purchased individually.

Transfer Students
The School of Art and Design accepts transfer students from accredited institutions of higher education and strives to keep the loss of credit to a minimum. The transfer student must be prepared to complete a minimum of 30 semester hours of undergraduate art course work on the Wichita State University campus.

Student Art Work
The School of Art and Design reserves the right to keep course art work submitted for course credit. In practice, this right is exercised sparingly, but in certain studio areas the selection of one piece by each graduating student contributes to an important instructional collection which is of great value to other students. The faculty also reserves the right to temporarily withhold art work for exhibition, and students are encouraged to exhibit work in the school as a significant part of the educational experience. At the same time, the School and the University cannot assure that student art work for exhibition purposes or take responsibility for its loss or damage under any circumstances. At the end of each semester, all students are required to remove from classrooms, laboratories, and studios all personal supplies and valued art work.

Graduation Requirements
Minor in Art
All students except art and design majors may complete 18 credit hours of art and be awarded the Minor in Art. Recommended plans of study for studio art, art
general education requirements, candidates for the BFA must complete the Foundation curriculum (21 hours), art history (6 hours), introductory art (21 hours), art electives (9 hours), and the concentration (24 hours). The specific requirements for the BFA with a concentration in design, studio arts, or art history are described under the appropriate program sections of the Catalog. Model programs of study are available in the School office.

Bachelor of Art Education

Competence in basic studio skills is emphasized in the Bachelor of Art Education (BAE) degree. In addition to the common core of studio skills and general studies, the student electing a career in teaching develops competencies in professional education and in specific studio areas. The professional education component is dealt with in a practical context, relating the learning of educational theories and strategies to the student’s day-by-day artistic experiences. Students are provided opportunities for various types of teaching and directed observation through the period of undergraduate art education study.

In addition to meeting the University’s scholastic, residence, and general education requirements for graduation, candidates for the BAE must complete the Foundation curriculum (21 hours), art history (6 hours), introductory art (12 hours), art specialization (9 hours), the art education concentration (21 hours), and professional education courses (32 hours). Courses within the art education curriculum fulfill both the University general education requirements for graduation and the Kansas certification requirements for teaching art at the secondary and elementary levels. The specific requirements for the BAE are given in the Art Education section of the Catalog. Model programs of study are available.

School Requirements and Course Listings

Foundation

The following courses will be required of all undergraduate art major students. Either the Foundation curriculum (21 hours) or the Core curriculum (12 hours) as designated in respective BFA or BA programs must be completed by the time students have completed 60 credit hours or junior status or prior to entry into classes where individual courses serve as prerequisites.

Transfer students with 60 hours and Foundation requirement deficiencies must complete course deficiencies no later than two semesters following entry.

Lower-Division Courses

136. Foundation Design I (3). An introduction to design for visual communication. A study of the elements of art and the principles of design relating to formal, Gestalt, and conceptual organization of the two-dimensional surface. Includes elements of line, shape, space, texture, and value. Instructional process includes lecture, critique, and supervised studio practice.

137. Foundation Design II (3). A continuation of Art F. 136 emphasizing the study of color including vocabulary, pigment mixing, color organization, and a review of the psychological effects of color as used in visual communication. Instructional process includes lecture, critique, and supervised studio practice. Prerequisite: Art F. 136.

145. Foundation Drawing I (3). Introduction to visual arts concepts, vocabulary, tools, materials, basic drawing skills, and attitudes through the drawing experience. Teaches perceptual skills and the ability to represent objects in space and organize them into a coherent pictorial statement along with technical and expressive competence with a limited range of media. Structured sketchbook assignments.

146. Foundation Drawing II (3). Reinforcement and elaboration of the concepts studied in Art F. 145 through introduction of abstraction, use of color, visualization, and other strategies for manipulating imagery. Students apply concepts to problems associated with composition, imaginative reconstructions, and idea generation. Structured sketchbook assignments. Prerequisite: Art F. 145.

189. Foundation 3-D Design. (3). Lectures, research, and studio methods on the evolutionary nature of the three-dimensional design in contemporary society utilizing a variety of combinations of materials, techniques, forms, and concepts. Also emphasizes learning to handle equipment and tools properly.

240. Foundation Life Drawing. (3). Introduction to drawing the human form emphasizing critical inquiry and analytical observation. Includes the study of skeletal and muscular structure. Students develop an understanding of the structure of the figure and demonstrate a degree of facility in its representation from observation and from imagination. Structured sketchbook assignments. Lab fee. Prerequisites: Art F. 145 and 146.

Art History

The art history area offers the BA and BFA degrees with concentration in art history. The area also offers support courses for design, art education, studio arts, and general education. Students develop a fundamental knowledge of art within a cultural and historical framework, and a basic understanding of art terms, concepts, and theory relevant to all
visual arts studies. Advanced level courses prepare students for professional pursuit of art history, museum studies, conservation, criticism, and secondary level teaching.

Bachelor of Arts in Art History
The Bachelor of Arts in Art History has a liberal arts perspective and is the initial professional degree in the field in preparation for graduate study in art history. Its primary emphasis is the presentation of knowledge of the monuments and principal artists of all major art periods of the past and a broad understanding of the art of the 20th century. This knowledge is augmented by study in greater depth and precision of several periods in the history of art and concentration in at least one area to the advanced seminar level. Students are required to have a reading proficiency in at least one major foreign language to support research through the reading of primary source materials.

Requirements. A minimum of 124 semester hours is required for a major with 81 art credits distributed as listed below:

Area    Hrs.
Core Curriculum ...........................................12
Art F. 136, Design I...........................................12
Art F. 143, Drawing I..........................................12
Art F. 189, 3-D Design ......................................15
Art F. 240, Life Drawing .....................................12
Art History ..................................................6
Art H. 121G, Survey of Western Art: Ancient .............12
Art H. 122G, Survey of Western Art: Renaissance and Baroque .......15
Art H. 124 Survey of Western Art: Modern .................24
Introductory Art courses and the Art History Concentration .........24
Art History Concentration ..................................24
Art H. 124 Seminar: Technique of Art History ................12
Plus courses as defined by faculty advisor

Note: A reading proficiency of a major foreign language and 40 credit hours of upper-division art courses are required for the BA in Art History.

Bachelor of Fine Arts in Art History
The Bachelor of Fine Arts in Art History combines intensive studies in art history with a thorough background in studio art. Students are expected to have an in-depth knowledge of one or more periods in the history of art and significant technical proficiency in one or more studio art areas. A reading proficiency of a major foreign language is required and courses in history, aesthetics, and cultural anthropology are strongly recommended.

Requirements. A minimum total of 126 semester hours is required for a major with 81 art credits distributed as listed:

Area    Hrs.
Foundation Curriculum ....................................21
Art F. 136 & 137, Design I & II ..................21
Art F. 145 & 146, Drawing I & II ...............21
Art F. 189, 3-D Design ...................................21
Art F. 240, Life Drawing ...................................21
Studio elective ...............................................21
Art History ..................................................6
Art H. 121G, Survey of Western Art: Ancient ..........12
Art H. 122G, Survey of Western Art: Renaissance and Baroque .........12
Introductory Art ...........................................21
Art H. 124, Survey of Western Art: Modern .................24
Art H. 300+, Art History ...................................24
Art S. 250, Introductory Oil Painting ..................24
Art S. 260, Printmaking ...................................24
Art S. 270, Basic Ceramics ..................................24
Art S. 272, Handbuilding ...................................24
Art S. 280, Sculpture .......................................24
Art S. 340, Life Drawing ...................................24
Arts Electives ..............................................24
Courses which complement the Introductory Art courses and the Art History Concentration .........24
Art History Concentration ..................................24
Art H. 426 Seminar: Technique of Art History .................12
Plus courses as defined by faculty advisor

Note: A reading proficiency of a major foreign language and 40 credit hours of upper-division art courses are required for the BFA in Art History.

123. Survey of Western Art: Medieval. (3). A historical survey of early Christian and Gothic art and architecture from the 5th through 14th centuries.

124. Survey of Western Art: Modern. (3). General education introductory course. An introduction to art through the study of a selected group of art objects produced in Europe and America from the 18th century to the present.

125. Non-Western Visual Traditions: North American Indian, Oceanic, and African Art. (3). Explores the native arts of Africa, the Americas, and of Oceania; the importance of the cultural, social, and political background of these arts and their function in society.

281. Cooperative Education. (1-8). Allows students to participate in the cooperative education program. Offered Cr/NC only.

Upper-Division Courses

>322. Medieval Art I. (3). General education further studies course. A study of the art of Europe and Byzantium from the time of Constantine to Charlemagne. Emphasizes style and iconography as it develops in mosaics and illustrated manuscripts.

>323. Medieval Art II. (3). General education further studies course. A study of Romanesque and Gothic architecture and sculpture with special attention to the developments in France.

>325. Art of the Ancient Near East and Egypt. (3). General education further studies course. Survey of the arts of ancient Egypt, Mesopotamia, and the Bronze Age cultures of the Aegean, concluding with a consideration of the interaction between Near Eastern and classical art. Prerequisite: Art H. 121G or instructor's consent.

>421Q. Greek Art and Architecture. (3). General education further studies course. A study of Greek art and architecture beginning with the Bronze Age and concluding with the Hellenistic period. Emphasizes understanding Greek art in its context and the methods and sources used in its analysis. Prerequisite: Art H. 121G or instructor's consent.

>422. Roman Art and Architecture. (3). General education further studies course. A study of Roman art and architecture beginning with their predecessors, the Etruscans, and concluding with early Christian art. Emphasizes understanding Roman art in its context and the methods and sources used in its analysis. Prerequisite: Art H. 121G or instructor's consent.

426. Seminar: Techniques of Art History. (3). A culminating study for senior art history majors which considers the history of the discipline, its research methods, and theory. Requires extensive readings and reports. Prerequisite: instructor's consent.


Courses for Graduate/Undergraduate Credit

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.

>521Q. Italian Renaissance. (3). General education further studies course. Painting, sculpture, and architecture in Italy from the 13th to the 16th centuries. Prerequisite: Art H. 122G or instructor's consent.

>522. Southern Baroque. (3). General education further studies course. Painting, sculpture and architecture in Italy and Spain from 1600 to 1750. Prerequisite: Art H. 122G or instructor's consent.


>526. Art Since 1945. (3). General education further studies course. A study of the history of art in the United States from 1945 to the present, stressing the relationship between contemporary trends in criticism and artistic practice.

529. Modern Architecture. (3). An overall view of the development of modern architecture from its inception in the early 20th century until today. Stresses theoretical connections between architecture and the arts of painting and sculpture as they developed in the United States and Europe.

>530. The Art of Classical Greece. (3). General education further studies course. A study of painting, sculpture and architecture of Greece during the 5th and 4th centuries B.C.

>531. The Art of Hellenistic Greece. (3). General education further studies course. A study of the painting, sculpture and architecture of Greece during the Hellenistic period, 4th to 1st centuries B.C.

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.

533. Seminar: Topics in Modern Art. (1-3). Selected readings and problems in art of the modern era. Directed further studies course. A study of art history. Directed readings 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—Visual Communication Art

Design programs are often classified as the communication arts, advertising arts, or visual communication. The professional practitioners are concerned with ideas and problem solving to effectively meet the communication needs of clients as diverse as corporations, publishers, advertising agencies, public and private institutions, and television stations. Design majors are trained to analyze visual communication problems as presented by client case studies, define the most appropriate approach, and implement creative and aesthetic solutions. The broad range of media used to investigate solutions to design problems include: print, advertising, packaging, presentation, computer graphics, photography, video, illustration, and television.

Bachelor of Fine Arts in Graphic Design

The design area offers the Bachelor of Fine Arts in Graphic Design which is the professional education and training degree for the visual communication arts field. The Foundation Curriculum and the preparatory course work in the graphic design program enables design majors to meet their vocational goal. Students are required to participate in the Portfolio Review during the second semester of their junior year and enroll in Art G. 434 and 435 during their final two semesters.

The graphic design concentration provides student selected courses in typography, illustration, photography, book design, advertising, computer graphics, design, and drawing.

Requirements. A minimum total of 126 hours is required for the BFA in Graphic Design and includes 84 semester hours of art courses listed below.

Area

<table>
<thead>
<tr>
<th>Foundation Curriculum</th>
<th>Hrs.</th>
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<tbody>
<tr>
<td>Art F. 136 &amp; 137, Design I &amp; II</td>
<td>21</td>
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<tr>
<td>Art F. 145 &amp; 146, Drawing I &amp; II</td>
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<tr>
<td>Art F. 189, 3-D Design</td>
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Art F. 240, Life Drawing
Studio elective
Art History ............................................. 6
Art H. 124, Survey of Western Art: Modern
Art H. 300+
Introductory Art .................................... 21
Art G. 200, Introduction to Computer Graphics
Art G. 216, Typography 1
Art G. 234, Graphic Design Studio 1
Art G. 235, Graphic Design Studio 2
Art G. 238, Materials and Graphic Processes
Art G. 316, Typography 2
Art G. 330, Still Photography for Graphic Design
Art electives ............................................. 12

Graphic Design Concentration ............... 24
Art G. 334, Graphic Design Studio 3
Art G. 335, Graphic Design Studio 4
Art G. 337, Drawing for Visual Communication 1
Art G. 353, Junior Portfolio Review
Art G. 434, Graphic Design Studio 5
Art G. 435, Graphic Design Studio 6
Art G. 437, Drawing for Visual Communication 2
Art G. 453, Graphic Design Senior Exhibition
Note: 40+ upper-division hours are required for graduation.

Courses eligible for the concentration and electives:

Art G. 331, Film/Video for Graphic Design
Art G. 339, Package Design
Art G. 430, Television for Graphic Design
Art G. 431, Darkroom Techniques
Art G. 431, Multimedia
Art G. 439, Editorial Illustration
Art G. 481, Cooperative Education
Art G. 493, Book Design Production
Art G. 530, Advanced Television
Art G. 530, Advanced Computer Graphics
Art S. 250, Introductory Oil Painting
Art S. 251, Watercolor and Acrylic Painting
Art S. 340, Life Drawing Studio
Art S. 345, Intermediate Drawing
Art S. 362, Printmaking II-Intaglio
Art S. 364, Printmaking II-Lithography
Art S. 365, Screenprint & Papemaking I
Art S. 545, Advanced Drawing Studio
Art S. 549, Independent Study in Drawing
Art S. 560, Advanced Printmaking Studio-Intaglio
Art S. 561, Advanced Printmaking Studio-Lithography
Lower-Division Courses

200. Introduction to Computer Graphics. (3). Introduces computer graphic programs in the Macintosh computer environment. Prerequisites: Art F. 136 and 145 or instructor's consent.


216. Typography I. (3). Introduces typography, including history, composiing skill, character counting and copyfitting, stylistic considerations, and visual and informational hierarchical arrangement upon a single page. Prerequisites: Art F. 137 and 337.

230. Introduction to Photography. (3). Introduces beginning photo students to basic camera operations, film and paper characteristics, darkroom procedures, and a historical overview of the development of photography. Students have an opportunity to acquire skills and techniques appropriate to photographic materials emphasizing the application of fundamentals of design. For students not majoring in graphic design.

231. Basic Photography (Motion Picture). (3). Introduces film production. Students may be required to furnish their own cameras.

234. Graphic Design Studio 1. (3). Studies graphic design theory, philosophy, history, and approaches to problem solving in visual communication. Prerequisites: Art F. 136 and 137.

235. Graphic Design Studio 2. (3). An achronatic layout course using single page applications that incorporate image and type. Prerequisite: Art G. 234.

238. Graphic Materials and Processes. (3). Introduces a variety of graphic processes and materials including printing processes, cut-paper technique, linocut cutting, embossment, foil + blind stamping, letterpress printing, marbling, box building, and assorted binding and presentation techniques. Prerequisite: Art F. 137 or instructor's consent.

281. Cooperative Education. (1-8). Allows students to participate in the cooperative education program. Graded Cr/NCr only.

Upper-Division Courses

316. Typography 2. (3). Studies type as form, symbol, and communication with exploration of letterforms and their applications utilizing traditional and computer skills and media. Prerequisites: Art G. 200 and 216.

330. Still Photography for Graphic Design. (3). Introduces still photography with a design emphasis. Development of photographic vision and skills for graphic designers in traditional black and white photography with exposure to digital scanning of traditional silver-based images for computer usage. Students may be required to furnish their own cameras. Prerequisite: Art F. 137 or instructor's consent.

331. Film/Video for Graphic Design. (3). Introduces film theory and video with a design emphasis. Examines the language and theory of sequential and moving images in traditional film/television and computerized multimedia forms as applied to graphic design. Prerequisites: Art F. 137, and Art G. 200 and 330.

334. Graphic Design Studio 3. (3). Continuation of Art G. 235 emphasizing the use of color with image and type. Prerequisite: Art G. 235.


339. Package Design. (3). Box construction and surface treatment in product design. Prerequisites: Art G. 238 and 334.

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

353. Junior Portfolio Review. (1). A forum for the student to analyze and present their portfolio to the faculty and invited community design professionals for commentary. Prerequisites: prior to the last 90 hours or prior to entering senior standing within the graphic design program.

430. Television for Graphic Design. (3). Examination and application of creative technical design media aesthetics. Graphic design application of traditional order and computerized imagery utilizing the television studio. Prerequisites: Art G. 200, 330, 331, or instructor's consent.

431. Design Media Topics. (3). Advanced study of photography, cinematography, or television with a design emphasis. Repeatable for credit. Prerequisites: Art G. 330, 331, or instructor's consent.

434. Graphic Design Studio 5. (3). Logo design and its application to graphic design. Prerequisite: Art G. 334. Repeatable for credit.


439. Editorial Illustration. (3). Concentration in editorial and narrative illustration emphasizing visualization and creative problem solving while exploring a variety of color media and technique. Prerequisite: Art G. 437. Repeatable for credit.

445. Senior Terminal Project. (1-3). Supervised independent study. Students in their final two semesters must present a plan of study for and complete a design project. Project and plan of study must be approved by the graphic design faculty. Repeatable for credit. Prerequisite: senior standing in graphic design.

453. Graphic Design Senior Exhibition. (2). A public exhibition of works produced for their superior demonstration of concept and layout execution involving a variety of visual communication problems. The student presents the exhibit in a professional manner. Prerequisite: completed during the last semester of the senior year.


493. Book Design and Production. (3). A laboratory course encompassing all facets of book including design, type composition, proofreading, illustration, manufacturing, binding materials (cloth, paper, and boards), distribution, copyright, royalties, and remaining. Students are responsible for the design and publishing of a limited edition book. Prerequisites: Art G. 334 and 337, or instructor's consent.

Courses for Graduate/Undergraduate Credit

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

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

Studio Art

The studio art area offers the Certificate in Decorative and Ornamental Painting and Design, BA in Studio Art and the BFA in Studio Art with concentrations in ceramics, painting/drawing, printmaking, and sculpture for students preparing for careers in art and design. The programs of study provide a thorough grounding in fundamental principles and techniques of the visual arts.

Certificate in Decorative and Ornamental Painting and Design

The certificate offers each student a broad range of experiences in a variety of media and processes in addition to an understanding and awareness of design and conceptual concerns in decorative ornamentation. Courses in color theory, drawing, oil painting, watercolor painting, acrylic painting, mixed media ornamentation design, and a terminal project are
required of each student and provides the foundation for successfully completing ornamental commissions after the certificate is completed. The knowledge and experience attained from these courses allow each student the flexibility necessary to pursue individual directions in ornamental design at a professional level. Students are required to complete a terminal project in creative and ornamental painting and design prior to completion of the certificate program.

Requirements: Twenty-one semester hours are required for the certificate:

Certificate curriculum ........................................... 21
Art F. 137, Foundation Design I
Art F. 145, Foundation Drawing I
Art S. 250 Introductory Oil Painting or
Art S. 251, Introductory Watercolor Painting or Art S. 252, Introductory
Acrylic Painting
Art S. 352, Decorative and Ornamental
Painting and Design
Art S. 552, Advanced Decorative and
Ornamental Painting and Design
Art S. 559, Terminal Project: Decorative
and Ornamental Painting and Design

Bachelor of Arts in Studio Art

The Bachelor of Arts in Studio Art degree provides a liberal arts emphasis on studio and design studies rather than the more intensive professional program of the BFA. The curriculum aims primarily towards breadth of experience and understanding rather than professional specialization.

Requirements: A minimum total of 124 semester hours is required for the BA in Studio Art and includes 60 semester hours of art courses as listed below.

Area Hrs.
Core Curriculum .................................................. 12
Art F. 136, Design I
Art F. 145, Drawing I
Art F. 189, 3-D Design
Art F. 240, Life Drawing
Art History ........................................................... 6
Art H. 124, Survey of Western Art:
Modern
Art H. 300+
Introductory Art ................................................... 15
Art F. 146, Drawing II
Art S. 250, Introductory Oil Painting
Art S. 260, Printmaking I
Art S. 270, Basic Ceramics or
272, Handbuilding
Art S. 280, Sculpture
Fine Arts Electives ............................................. 12
Fine Arts courses which complement
the Introductory Art courses and the
Studio Art Concentration

Ceramics Concentration ........................................... 24
Art S. 270, Basic Ceramics
Art S. 272, Handbuilding
Art S. 370, Intermediate Ceramics
(take 3 times)
Art S. 570, Advanced Ceramics
(take 2 times)
Art S. 572, Advanced Handbuilding

Note: 40+ upper-division hours are required for graduation.

Bachelor of Fine Arts in Studio Art

The Bachelor of Fine Arts in Studio Art is the initial professional degree in the field in preparation for graduate study in studio art. This studio experience is of prime importance in the preparation of students for professional careers in art. In this intense program, the student becomes familiar with every aspect, technique, and direction in their chosen BFA concentration. The studio art major is then expected to achieve the highest possible level of technical skill in that concentration and its expressive possibilities.

BFA in Studio Art—Ceramics

The Bachelor of Fine Arts in Studio Art with a concentration in ceramics offers the basic techniques of clay forming (hand-building, casting, and throwing), the use of slips and glazes, and firing processes such as stoneware, low-fire, and raku, with an emphasis on experimentation with the medium to investigate individual interests.

Requirements: A minimum total of 126 semester hours is required for a ceramics major with 81 credits distributed as listed below.

Area

Foundation Curriculum ........................................... 21
Art F. 136 & 137, Design I & II
Art F. 145 & 146, Drawing I & II
Art F. 189, 3-D Design
Art F. 240, Life Drawing
Studio elective

Art History ........................................................... 6
Art H. 124, Survey of Western Art:
Modern
Art H. 300+
Introductory Art ................................................... 21
Art S. 250, Introductory Oil Painting
Art S. 251, Introductory Watercolor
Painting
Art S. 260, Printmaking I
Art S. 280, Sculpture
Art S. 340, Life Drawing Studio
Art S. 340 or 345, Intermediate
Drawing
Art S. 362, Printmaking II or Art S. 364,
Printmaking III
Art S. 545, Advanced Drawing
Art Electives ....................................................... 9
Courses which complement the
Introductory Art courses and the
Ceramics Concentration

Courses for Graduate/Undergraduate Credit

Art S. 270, Basic Ceramics
Art S. 272, Handbuilding
Art S. 370, Intermediate Ceramics
(take 3 times)
Art S. 570, Advanced Ceramics
(take 2 times)
Art S. 572, Advanced Handbuilding

Note: 40+ upper-division hours are required for graduation.

Lower-Division Courses

Art S. 270, Basic Ceramics Studio. (3) Experience in handbuilding, wheel throwing, glazing methods. Lectures and demonstrations relative to various handbuilding techniques. Activities include lectures, demonstrations, and research related to historical as well as contemporary studies of clay vessels and sculptural forms. Prerequisite: Art S. 189 and Art S. 270, or departmental consent for nonmajors.

Art S. 570, Advanced Ceramics Studio. (1-3) Lab fee. Advanced studio problems involving forming methods, glaze formulation and firing procedures. Lecture periods involve advanced studies of ceramic materials and glaze formulation. Repeatable for credit. Prerequisite: Art S. 370 and instructor's consent.

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: Art S. 374.

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: Art S. 275 and 370.

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: Art S. 375.

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

870. Special Problems in Ceramics. (1-5). Research in advanced problems in ceramics. Repeatable for credit.

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.

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: Art S. 875.

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

BFA in Studio Art—Painting/Drawing

The Bachelor of Fine Arts in Studio Art with a concentration in painting/drawing offers intensive studio work organized within a pattern of courses designed to promote the development of concepts and their realization in vital material form. This approach requires a foundation in the fundamental aspects of painting media, as well as an understanding of the historical and social context in which painting is encountered.

Requirements: A minimum total of 126 semester hours is required for a painting/drawing major with 81 credits distributed as listed below.

**Area Hrs.**

Foundation Curriculum ...........................................21
Art F. 136 & 137, Design I & II
Art F. 145 & 146, Drawing I & II
Art F. 189, 3-D Design
Art F. 240, Life Drawing Studio elective

Art History ...................................................6
Art H. 124, Survey of Western Art: Modern
Art H. 300+

Introductory Art.............................................21
Art S. 250, Introductory Oil Painting
Art S. 251, Introductory Watercolor Painting.
Art S. 260, Printmaking
Art S. 270, Basic Ceramics Studio
Art S. 272, Handbuilding
Art S. 280, Sculpture
Art S. 340, Life Drawing Studio
Art S. 362, Printmaking II or Art S. 364, Printmaking III

Art Electives ...............................................9
Courses which complement the Introductory Art courses and the Painting/Drawing Concentration

Painting/Drawing Concentration .............24
Art S. 345, Intermediate Drawing
Art S. 350, Painting (take 4 times)
Art S. 351, Intermediate Watercolor Studio
Art S. 354, Intermediate Painting Studio
Art S. 545, Advanced Drawing
Art S. 550, Advanced Painting
(take 2 times)

*Repeatable courses*

**Note:** 40+ upper-division hours are required for graduation.

**Drawing Courses**

Drawing is the integral discipline of the four major programs of the studio art area—painting, printmaking, sculpture, and ceramics—as well as the areas of graphic design and art education.

**Upper-Division Courses**

340. Life Drawing Studio. (3). Lab fee. Emphasizes individual development, figurative observation and interpretation. Repeatable for credit. Prerequisite: completion of foundation program.

345. Intermediate Drawing. (3). Drawing projects, figurative or nonfigurative. Includes problems of style, suites of related works and history of drawing techniques, and materials. Prerequisite: completion of foundation program.

Courses for Graduate/Undergraduate Credit

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: Art S. 340 and 345.

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: Art S. 340, 345 and instructor’s consent.

Courses for Graduate Students Only

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

845. Special Problems in Drawing. (1-3). Advanced drawing in various media emphasizing independent work and the development of personal expression. Repeatable for credit.

**Painting Courses**

**Lower-Division Courses**

250. Introductory Oil Painting. (3). Introduces oil and alkyd painting emphasizing studio practices, fundamental principles, and techniques.

251. Introductory Watercolor Painting. (3). Introduces transparent and opaque watercolor painting emphasizing studio practices, fundamental principles, and techniques.

252. Introductory Acrylic Painting. (3). Introduces acrylic painting emphasizing studio practices, fundamental principles, and techniques.

**Upper-Division Courses**

351. Intermediate Watercolor Studio. (3). Emphasizes individual development, personal interpretation, and creativity. Repeatable for credit. Prerequisites: completion of the foundation program and Art S. 251, or departmental consent.

352. Decorative and Ornamental Painting and Design. (3). An overview of historical and contemporary decorative and ornamental art utilizing slide lecture, classroom demonstration, and studio activity to study techniques including trompe l’oeil marbling, graining, faux finishes, stenciling, and ornamental methods for their adaptation to interior, exterior, and furniture decoration and design. Classroom projects can become part of a professional job portfolio. Prerequisites: Art F. 340 and 145, Art S. 250 or 252, or instructor’s consent.

354. Intermediate Painting Studio. (3). Emphasizes individual development, personal interpretation, and creativity. Repeatable for credit. Prerequisites: completion of foundation program, Art S. 250, Art S. 251 or 252, or departmental consent.
Courses for Graduate/Undergraduate Credit

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

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: Art S. 352 or instructor's consent.

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.

554. Advanced Painting Studio. (1-3). For the professionally oriented student. Emphasizes independent study. Repeatable for credit. Prerequisites: four semesters of Art S. 354 and interview with instructor.

555. 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: Art S. 552.

Courses for Graduate Students Only

580. 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.

586-859. Terminal Project—Painting. (1-5; 1-5).

BFA in Studio Art—Printmaking

The Bachelor of Fine Arts in Studio Art with a concentration in printmaking offers a broad range of studio experiences in two primary printmaking disciplines, intaglio and lithography. Supplementing these areas are relief, screen printing, collagraph, and papermaking. The program provides a wide exposure to traditional and contemporary techniques.

Requirements: A minimum total of 126 semester hours is required for a printmaking major with 81 credits distributed as listed below.

Area

Foundation Curriculum ........................................21
Art F. 136 & 137, Design I & II
Art F. 145 & 146, Drawing I & II
Art F. 189, 3-D Design

Art F. 240, Life Drawing
Studio elective ..................................................6
Art History .........................................................6
Art H. 124, Survey of Western Art: Modern
Art H. 300+
Introductory Art ................................................21
Art S. 250, Introductory Oil Painting or Art S. 251, Introductory Watercolor Painting
Art S. 260, Printmaking
Art S. 270, Basic Ceramics Studio or Art S. 272, Handbuilding
Art S. 280, Sculpture
Art S. 340, Life Drawing Studio
Art S. 340 or 345, Intermediate Drawing
Art S. 354, Intermediate Painting Studio

Art Electives .......................................................9

Courses which complement the Introductory Art courses and the Printmaking Concentration

Printmaking Concentration ....................................24
Art S. 356, Printmaking I
Art S. 364, Printmaking II
Art S. 364, Printmaking III
Art S. 300+, printmaking elective
Art S. 545, Advanced Drawing
Art S. 560, Advanced Printmaking Studio—Intaglio (6 credits)
or Art S. 561, Advanced Printmaking Studio—Lithography (6 credits)

* repeatable courses

Note: 40+ upper-division hours are required for graduation.

Lower-Division Courses

161. Printmaking for Non-Art Majors. (3). Involves basic intaglio methods, etching, aquatint, soft ground, and mixed media techniques, as well as linoleum or wood block techniques, embossment, and a simplified unit on papermaking.

260. Printmaking I. (3). An introduction to printmaking. Exploratory work in intaglio, collage, woodcut, or relief techniques, and a simplified unit on papermaking.

Upper-Division Courses

362. Printmaking II. (1-3). Basic intaglio methods (etching, engraving, soft ground, aquatint, and mixed techniques). Second semester includes color printing in intaglio, collage, or mixed techniques. Repeatable for credit one semester. Prerequisite: Art S. 260.

364. Printmaking III—Lithography. (3). Introduces lithography printing from the stone in black and white. The second semester includes color printing in lithography and combined techniques. Repeatable for credit. Prerequisites: completion of foundation program and Art S. 260.

365. Basic Screenprinting and Papemaking I. (3). Part I introduces basic screening and papermaking techniques (black-block out) and resists. As well as basic photographic methods. Emphasizes multi-color printing. Second part involves basic papermaking methods (sheet forming and paper cast from a mold). Prerequisites: completion of foundation program and Art S. 260.

Courses for Graduate/Undergraduate Credit

560. Advanced Printmaking Studio—Intaglio. (1-3). Intaglio, collagraph and mixed techniques. For students interested in professional printmaking, course offers specialization in color printing or black and white. Repeatable for credit. Prerequisites: Art S. 260, 262 and 364.

561. Advanced Printmaking Studio—Lithography. (1-3). Lithography, black and white or color. For students interested in professional printmaking; course offers specialization in color printing. Repeatable for credit. Prerequisite: Art S. 364.

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

860. Special Problems in Printmaking—Intaglio. (1-5). Advanced printmaking on an individual basis. Gives encouragement to investigation, combined with a craftsman-like approach. Techniques include all intaglio, relief and combined methods, black and white and color. Repeatable for credit.

862 & 863. Special Problems in Printmaking—Lithography. (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.

866-869. Terminal Project—Printmaking. (1-5; 1-5).

BFA in Studio Art—Sculpture

The Bachelor of Fine Arts in Studio Art with a concentration in sculpture offers a varied and rich learning experience in three-dimensional media. The sculpture studios in Henrion Annex, where clay figure modeling, steel fabricating, wood and stone carving, and bronze or aluminum casting take place continually, exposes the student to the diverse sculpturing processes and how they relate to other artists' concepts.

Requirements: A minimum total of 126 semester hours is required for a sculpture major with 81 credits distributed as listed below.

Area

Foundation Curriculum ........................................21
Art F. 136 & 137, Design I & II

Art F. 145 & 146, Drawing I & II
Art F. 189, 3-D Design
Art F. 145 & 146, Drawing I & II
Art F. 189, 3-D Design
Art F. 240, Life Drawing
Studio elective
Art History ............................................. 6
Art H. 124, Survey of Western Art: Modern
Art H. 300+
Introductory Art ........................................ 21
Art S. 250, Oil and Alkyd Painting or Art S. 251, Watercolor and Arylic Painting
Art S. 260, Printmaking
Art S. 280, Sculpture
Art S. 340, Life Drawing Studio*
Art S. 340 or 345, Intermediate Drawing
Art S. 362, Printmaking II or Art S. 364, Printmaking III
Art Electives ............................................ 9
Courses which complement the Introductory Art courses and the Sculpture Concentration
Sculpture Concentration .................................. 24
Art S. 380, Sculpture (take 2 times)
Art S. 381, Cast Sculpture
Art S. 545, Advanced Drawing*
Art S. 580, Advanced Sculpture
Art S. 300*, sculpture elective (take 2 times)
* repeatable courses

Note: 40+ upper-division hours are required for graduation.

Lower-Division Course

280. Sculpture (3). Introduces sculptural techniques in welded steel, assemblage, kinetics, and optics. Prerequisites: Art F. 145 and 189.

Upper-Division Courses

380. Sculpture Studio. (1-3). Emphasizes the main approaches to sculpture. Stresses the form, concept and construction of sculpture. Includes carving techniques in wood, stone and/or plastic; construction and assemblage techniques selected from wood, plastic, metal (welded, brazed, riveted, etc.), and/or combined materials. Repeatable once for credit. Prerequisites: completion of foundation program and Art S. 280.

381. Cast Sculpture Studio. (3). Casting techniques for bronze and aluminum sculpture. Uses plaster investment, CO2 set sand, foam vaporization, and vitrified shell molds to develop individual and unique approaches to cast sculpture. Prerequisites: completion of foundation program and Art S. 280.

Courses for Graduate/Undergraduate Credit

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

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

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.

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

Art Education

The art education area offers the Bachelor of Art Education degree for students interested in an art education teaching career. The goal of the program is to develop a highly competent art teacher who is intellectually informed, skilled in studio performance, and able to communicate with and motivate students. All art education majors are required to specialize in either studio art, design, or art history as an emphasis area. Students observe teaching techniques, teach in public schools, and attend seminars in education and art education topics.

Bachelor of Art Education

The Bachelor of Art Education has the same Foundation and art history requirements as the BFA in Studio Art. This degree serves the student who plans to teach art on the elementary, middle, or secondary level. Its studio component emphasizes the breadth of studio art experience.

Requirements: A minimum total of 143 semester hours is required for an art education major with 70 art credits and 31 education credits distributed as listed below.

Area

Foundation Curriculum .......................... 21
Art F. 136 & 137, Design I & II
Art F. 145 & 146, Drawing I & II
Art F. 189, 3-D Design
Art F. 240, Life Drawing
Studio elective
Art History ............................................. 6
Art H. 124, Survey of Western Art
Art: Modern
Art E. 514Q, Aesthetic Inquiry
Introductory Art ................................. 12
Art S. 270, Basic Ceramics Studio or
Art S. 272, Handbuilding
Art E. 302, Jewelry
Art E. 313, Fiber Exploration
Plus one of the following:
Art S. 250, Introductory Oil Painting
Art S. 251, Introductory Watercolor Painting
Art S. 260, Printmaking
Art G. 330, Photography

Art Specialization .................................. 9
Three courses from one of the following: ceramics; painting/drawing; printmaking; sculpture; design—graphic, illustration, 3-D, multi-media; or art history

Art Education Concentration ..................... 18
Art E. 311, Art Education—Elementary School
Art E. 410, Art Education—Middle School/Jr. High
Art E. 414, Art Education—High School
Art E. 419, Micro Computer
Art E. 510Q, Stimulating Creative Behavior
Art E. 515, Developing Visual Materials

Professional Education Requirements ... 32
Specified courses in block sequences include Art E. 517, Student Teaching Seminar.

Note: 40+ upper-division hours are required for graduation.

Student Teaching

Admission into the student teaching year requires senior standing (90 hours or 200 credit points); a minimum cumulative grade point average of 2.500 and 2.500 in art courses at the time of application for student teaching; a grade of C or better in College Algebra; a grade of C or better in English Composition (Engl. 101 and 102 or its equivalent); a grade of C or better in oral communication; completion of curriculum and instruction and art education prerequisites; satisfactory physical examination; and recommendation by the art education program following a formal interview. Admission to teacher education is determined early in the students’ program (see College of Education—Admission to Teacher Education Programs). Students must apply for student teaching by midterm of the fall semester prior to the student teaching year. A grade of C or better in student teaching is necessary to receive a recommendation for a teaching certificate.

Graduates of the program applying for teacher certification in Kansas are required to complete the National Teachers Examination as established by the Kansas State Department of Education in order to qualify for their initial certificate.

Review of course content will be required for transfer of art education credits from other institutions.
Lower-Division Courses

115. Human Experience and the Arts. (3). Focuses on the environmental stimuli of the elementary-age student and Junior High School. (3). A study of the development of sensory growth of the elementary-age student and the role of the teacher, the significance of sensory experience, and aesthetic behavior. Emphasizes the potential for creative behavior as a natural means of a child to respond to environmental stimuli.

281. Cooperative Education. (I-8). Allows students to participate in the cooperative education program. Offered Cr/Ncr only.

Upper-Division Courses

302. Jewelry Design/Construction. (3). Emphasizes metal working processes (forging, forming, casting, sawing, cutting, fusing, soldering) with subordinate emphasis on soft jewelry and ceramic processes applicable to jewelry.

310. Art Education in the Elementary School. (3). A study of philosophy, psychology, and sensory growth of the elementary-age student, emphasizing the content, objectives, methods, and evaluation of the elementary school art program. Students teach in the Children's Art Workshop. Prerequisite: art education major, upper-division eligibility.

311. Art Education Curriculum in the Elementary School. (1-3). Studies developmental characteristics of the elementary-age student and the development of the art program with respect to materials, skills, and knowledge content.

313. Fiber Exploration. (3). Focuses on fiber experiences appropriate for the classroom on the intermediate or secondary level. Explores various kinds of looms weaving, braiding, and twisting techniques that result in a fabric or web. Explores simple dye techniques.

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

310. Art Education in the Middle School/Junior High School. (3). A study of the philosophy, psychology, and evaluation of the middle school/junior high school student, emphasizing the content, objectives, methods, and evaluation of the middle school/junior high school art program. Students participate in a field experience in a middle school/junior high school. Students enroll in this course during the fall semester preceding Spring semester student teaching. Prerequisite: Art E. 310, 311.

413. Independent Study. (1-4). Directed independent study in art education not normally covered in other course work. Prerequisite: instructor's consent.

414. Art Education in the Senior High School. (3). A study of the philosophy, psychology, and artistic development of the senior high student, emphasizing the content, objectives, methods, and evaluation of the senior high school art program. Students participate in a field experience in a senior high school. Prerequisite: Art E. 310 or equivalent.

419. Micro-Computer Applications to Art Education. (1-3). A study of the curricular and instructional uses of the Macintosh computer to art education. Students learn a variety of procedures for generating computer art images for instruction and self-expression and use a variety of micro-computer software and hardware. Students apply the Macintosh computer to the art curriculum and instruction. Prerequisite: Art E. 310 or equivalent.

481. Cooperative Education. (1-8). Allows students to participate in the cooperative education program. Offered Cr/Ncr only.

Courses for Graduate/Undergraduate Credit

510Q. 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.

514Q. 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.

515. Developing Visual Materials for Art Education. (3). A production laboratory that emphasizes the integration and selection of appropriate visual media for art instruction. Prerequisite: Art E. 311.

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

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: Art E. 212, 302 or instructor's consent.

710. Creative Behavior and Visual Thinking. (3). Identifies 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.

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.

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.

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.

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.

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.

719. Electronic Imaging. (1-3). Focuses on 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 new technology to problems of design, art history, and art criticism. Develops curriculum materials for art instruction employing computer graphic instruction. The graduate student prepares a research paper on a selected topic related to computer graphics and art learning.

720. Art and Early Childhood. (1-3). Emphasizes the cognitive and aesthetic domains of young children and develops the potential for creative and visually expressive behavior as a natural means of a child responding to environmental stimuli.

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

Courses for Graduate Students Only

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.

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

818-819. Terminal Project—Art Education. (1-3; 1-3).
School of Music
J. William Thomson, Chair
The School of Music, which includes program areas of music education, musicology/composition, keyboard, strings, voice, and winds/percussion, offers courses and curricula designed to train and educate students who are planning careers in music. In addition, the school's offerings allow students to gain an understanding of music as a humanistic study. Recitals by students, faculty, and guests are augmented by the overall community programs in the fine arts.

Students in the School of Music enjoy the use of extensive facilities in the Duerksen Fine Arts Center and Wiedemann Hall; these include the Lewis and Selma Miller Concert Hall and the recital/concert auditorium in Wiedemann Hall, which was constructed in 1986 to house the first Marcusen organ in North America.

Policies
Proficiency Examinations
Students eligible for University enrollment may enter a music degree program. However, majors in music must demonstrate their performance ability on a minimum of one instrument or in voice. After their initial registration, students have their proficiency judged by their major professor; thereafter, they must perform for a faculty jury each semester to determine their proficiency level and progress. Semester proficiency cards, on which progress is recorded, are maintained for each student.

All music majors must pass a piano proficiency examination. Entering students majoring in music whose background indicates that they are competent in piano may pass the requirement by special examination. Students who have not satisfied all piano proficiency requirements must enroll in class piano until they meet those requirements. Transfer students who submit proof of the completion of a comparable piano proficiency examination by official transcript or letter from their former institution are exempted from this requirement.

All proficiency examinations must be passed before a student is allowed to student teach.

Applied Music
Individual instruction is given in instruments and voice to develop musicianship, performance skills, and reading knowledge of music literature. Specific requirements for each level are set by the individual applied areas.

Applied students other than music majors must enroll in the appropriate nonmajor category (see Schedule of Courses). This will provide a 30-minute lesson per week.

One-credit hour enrollments are provided to music majors studying secondary instruments. These receive a 30-minute lesson each week and require a minimum of five hours of practice per week.

Two-credit hour enrollments are provided to majors and special music students. These receive either (1) a 30-minute private lesson (minimum) each week and a one-hour master class each week or (2) a one-half hour lesson per week or other equivalent arrangements at the option of the instructor. Students are required to practice a minimum of ten hours each week.

Four-credit hour enrollments are provided to performance majors (juniors and above) and special music students. These receive two 30-minute lessons each week (minimum) and a one-hour master class each week, or other equivalent arrangements at the option of the instructor. Students are required to practice a minimum of 20 hours per week.

Students receive academic credit for applied music instruction only when they are taught on the University campus by approved music faculty. Students wishing to drop an applied lesson registration must inform the instructor in person and secure his/her signature on the drop form before approval may be given by the college office.

Applied music students may enroll in the following classifications: freshmen and sophomores, Mus. A. 112 (nonmajors), 231 and 232; juniors and seniors, Mus. A. 112 (nonmajors), 431, 432, and 434; and graduate students, Mus. A. 712 (nonmajors), 731, 732, and 734*. These applied music courses are repeatable for credit.

Prior to graduation all music majors must achieve an acceptable level of performance proficiency, which is determined by the faculty according to each student's degree program. In addition, students may be required to pass an examination on materials in their chief performing medium.

*Performance majors or designated students only may enroll in 434 or 734.

Recitals
All music majors are required to enroll in four semesters of Mus. P. 050, Recital, and attend a minimum of 14 specified recitals and concerts sponsored by the School of Music each of the semesters. For majors other than BA, performance of the senior recital fulfills a fifth semester recital requirement; they must be enrolled in Recital during that semester (Mus. 400 for BME and BM majors; Mus. 450 or 451 for accompanying majors). Senior recital is not required for the BA in music.

All music majors are required to declare a chief performance medium. BM and BME majors are required to present a public or jury recital prior to graduation. The decision as to whether the performance will be jury or public is made by an examining committee. Students present to the examining committee a projected senior recital program and the examining committee determines: (1) the suitability of the projected program, (2) the capability of the student to perform the program publicly, or (3) the advisability of performing the senior recital before a faculty jury in lieu of a public recital.

Further recital specifications are found under graduation requirements for Bachelor of Music in Theory-Composition.

No music major may prepare or perform the senior recital without the guidance of a School of Music faculty member. In the event the required applied music credit hours have been earned prior to the recital presentation, music majors may continue to enroll (2 credit hour minimum) in their major instrument through the preparation for and the performance of the recital. The required number of credit hours must be earned in applied instruction even though there may be credits to complete after the senior recital has been performed.

Graduation Requirements
Bachelor of Music Requirements
Students receiving the BM choose either a performing medium (piano, organ, voice, strings, wind, or percussion) or theory/composition as their major area of concentration.

The general graduation requirements of the University must be met as described in the Catalog under Academic Information—Requirements for Graduation. In addition, certain music requirements must be met for the different degree emphases in the School of Music.

BM in Theory-Composition
Area.................................................................. Hrs.
Applied Music........................................... 20
Chief performing medium
(20)
(piano, organ)........................................... 16
Other performing media ........................................ 4
or Chief performing medium (nonkeyboard) ................. 8
Keyboard performing medium .................................. 8
Other performing media ........................................ 4
Theory and Composition ......................................... 40
Mus. C. 127Q-129, 128-130, 227-229, 228-230, 259, 523, 560, 651, 661, 561, 661, 671 and 672
History and Literature of Music ................................ 12
Mus. C. 113Q, 334Q, and 335Q, and three hours of upper-division electives in music history or literature
Conducting .............................................................. 4
Mus. P. 207 or 208 and 209 or 210
Ensembles* ............................................................ 8-10
Electives (music or nonmusic courses) .......................... 7
Recital attendance (four semesters of Mus. P. 650)
Senior Recital (Mus. P. 400) ........................................ 1
Theory-composition majors are required to present for public performance a selection of their compositions representing large and small forms, totaling a minimum of 20 minutes. Students must submit completed scores representing a majority of the program to an examining committee the semester prior to that of the proposed recital; the examining committee shall determine the acceptability of the program. The composition or compositions must be submitted in a minimum of two copies done manually in ink or by laser printing using an approved music typesetting computer program. These copies must represent a high quality of manuscript technique or music typesetting. In addition, students may elect to present a second recital in their chief performing medium with the permission of their applied music instructor and achievement of junior proficiency in that instrument.

### BM in Performance—Instrumental Emphasis

**Area** .............................................................. **Hrs.**
**Applied Music** ................................................. **28**
Chief performing medium ....................................... **24**
Second performing medium (four semesters) .................. **4**
Theory ..................................................................... **22**
Mus. C. 127Q-129, 128-130, 227-229, 228-230, 523, 560 or 661 and 641, 645, 643 or 345
History and Literature of Music ................................ **12**
Must include Mus. C. 113Q, 334Q, and 335Q
Conducting ................................................................ **4**
Mus. P. 217 or 218 and 651 or 691
Ensembles* ............................................................ **14**
Electives .................................................................. **10**
Pedagogy (Mus. P. 620 for violin/viola; Mus. P. 680 for woodwind; Mus. P. 681 for brass; Mus. P. 682 for percussion; Mus. P. 790 for all other instrumental BM majors) ................. **2**
Senior Recital (Mus. P. 400) ........................................ 1
Recital attendance (specified number of recitals per semester for four semesters, Mus. P. 050)

> *See degree checklists for specified electives.*

### BM in Performance—Keyboard Emphasis

**Area** .............................................................. **Hrs.**
**All Programs** ...................................................... **4**
**Applied Piano** ..................................................... **24**
**Chief performing medium** (see specific major below)
**Second performing medium** ................................. **4**
**Theory** .............................................................. **22**
Mus. C. 127Q-129, 128-130, 227-229, 228-230, 523, 561 or 661, 345 or 641
**History and Literature of Music** .............................. **9**
Mus. C. 113Q, 334Q, and 335Q
**Conducting** ........................................................ **4**
Mus. P. 217 or 218 and 651 or 691
Ensembles (see specific major below)
Recital Attendance
Mus. P. 050 (enrollment for four semesters in a specified number of recitals)

### Piano Performance Emphasis

**Area** .............................................................. **Hrs.**
**Piano Performance Emphasis** ................................ **24**
**Applied Piano** ..................................................... **24**
**Mus. P. 250 and 251**
**Applied Concerto** ............................................... **4**
**Mus. P. 107-407, Piano Repertoire** ....................... **6**
**Mus. P. 580, Piano Pedagogy** ............................... **2**
**Mus. C. 782 and 783, Piano Literature** ................... **4**
Ensembles (four semesters of accompanying required for all Bachelor of Music piano majors and 4 hours of appropriate ensemble. Keyboard scholarship recipients are required to enroll in accompanying each semester they hold a scholarship.)
Mus. P. 400, Senior Recital (piano) .............................. **1**
Electives ............................................................... **15**

### Organ Emphasis

**Area** .............................................................. **Hrs.**
**Organ Emphasis** .................................................. **24**
**Applied Organ** .................................................... **24**
**Mus. C. 597 and 598, Organ Literature and Practice** .... **2**
Ensembles ............................................................. **10**
(Keyboard scholarship recipients are required to enroll in accompanying each semester they hold a scholarship.)
Mus. P. 400, Senior Recital (organ) .............................. **1**
Electives ............................................................... **15**

### BM in Performance—Vocal Emphasis

**Area** .............................................................. **Hrs.**
**Applied Music** ..................................................... **26**
**Voice** ................................................................. **24**
**Piano (two semesters)** .......................................... **2**
Study in another instrument may be substituted if student meets piano proficiency requirement
**Theory** .............................................................. **18**
Mus. C. 127Q-129, 128-130, 227-229, 228-230 and 523 or 661
**History and Literature of Music** .............................. **9**
Mus. C. 113Q, 334Q, and 335Q
**Conducting** ........................................................ **2**
Mus. P. 218
**Voice Pedagogy and Repertoire** .............................. **9**
Mus. P. 121, 122, 221, 222, 224, 225, 226, 227, 228, 229, 230, 523, and Mus. C. 726
Ensembles (see degree checklists for specified electives) .... **10**
Electives (in upper-division theory, conducting or choral literature) .......................................................... **10**
Senior Recital (Mus. P. 400) ........................................ 1
Recital attendance (specified number of recitals per semester for four semesters, Mus. P. 050)
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<th>Area</th>
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<td>BM with Elective Studies in Business</td>
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<tr>
<td>Applied Music</td>
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<td>Chief performing medium</td>
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<td>History and Literature of Music</td>
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<tr>
<td>Conducting</td>
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<td>Electives</td>
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<td>Electives for specified ensembles</td>
<td>8 or 10</td>
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<td>BM with Elective Studies in Theatre</td>
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<tr>
<td>Applied Music</td>
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<td>Chief performing medium</td>
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<td>Theory</td>
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<td>History and Literature of Music</td>
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<td>Electives</td>
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<td>Applied Music</td>
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<td>Chief performing medium</td>
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<td>Second performing medium</td>
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<td>Theory</td>
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<td>Applied Music</td>
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<td>Chief performing medium</td>
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<td>BM with Elective Studies in Journalism</td>
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**Bachelor of Music Education Requirements**

Students receiving the BME must meet the state requirements for the secondary three-year certificate and three-year elementary certificate. Students may select from three options within this degree:

1. **Instrumental emphasis** offered to satisfy the needs of students whose chief performing medium is instrumental or keyboard and who plan to enter the field of instrumental music teaching in the public schools.

2. **Vocal emphasis** offered to satisfy the needs of students whose chief performing medium is voice, piano, or guitar and who plan to enter the field of vocal and general music teaching in the public schools.

3. **Special music education emphasis** offered to satisfy the needs of students, either vocal or instrumental specialists, who plan to enter the field of music education for special education children in the public schools.

**Student Teaching**

Admission into the student teaching semester requires a minimum cumulative grade point average of 2.500; a minimum grade point average of 2.500 in music courses; senior standing (90 hours—200 credit points); a grade of C or better in Eng. 101 or its equivalent and Eng. 102, College English I and II, Comm. 111, Public Speaking, and Math 111. College Algebra; completion of prerequisites in educational psychology; foundations of education and music education methods;
successful completion of the piano proficiency exam; successful completion of a physical examination; and a recommendation by the music education area.

Transfer students must satisfy education requirements for prerequisites not taken at Wichita State.

All students must have an application on file with the music education area and receive its approval. Students must file applications with the Director of Music Education.

Graduation Requirements
The following program fulfills both the University requirements for graduation and the Kansas certification requirement and must be taken by all Bachelor of Music in Music Education candidates. In completing the BME program, the student must meet the general education program requirements of the University given in the Academic Information—Requirements for Graduation section of the Catalog.

Professional Education Requirements

Education

Area

Hrs.

Applied Music

29

CESP 334

2

CESP 433

2

CI 301

2

CI 302

2

CI 311

1

CI 312

1

CI 328

5

CI 427

2

CI 430

3

CI 451

4

CI 457

1

CI 469

4

*These courses are taken during the student teaching semester.

Additional Courses Required for Instrumental Emphasis

Area

Hrs.

Applied Music

16

Instrumental majors

14

(piano)

2

Keyboard majors

14

(chief medium)

2

(secondary instrument)

2

Electric bass majors

10

(electric bass)

4

(piano)

2

Students must be enrolled in applied music during the semester of their senior recital.

General Music

24-26

Mus. C. 127Q-129, 128-130, 227-229, 228-230, 523, 641 or 753 or 754,

Mus. P. 217 or 218, 651 or 691.

Ensembles

7 (see degree sheets for specified ensembles)

Recital attendance

Four semesters of Mus. P. 050

Plus Mus. P. 400, Senior Recital

Music Education

18

Mus. E. 204, 304, 404* and 611

10

Mus. E. 235, 236, 237, 238, 239,

240, 1 hour voice, and 342

8

Additional Courses Required for Vocal (Keyboard) Emphasis

Area

Hrs.

Applied Music

16

Vocal majors (voice)

14

(piano)

2

Keyboard majors (piano)

14

(1 hour voice and Mus. E. 342)

2

Students must be enrolled in applied music during the semester of their senior recital.

General Music

25

Mus. C. 127Q-129, 128-130, 227-229, 228-230, 523, 641 or 753 or 754,

Mus. P. 217 or 218, 651 or 691; 1 hr.

of music electives for vocal majors;

for piano majors, Mus. P. 580 or 581, 307, and 407 required

Ensembles

7 or 9

Vocal

9

Harp, organ, guitar, electric bass majors, piano majors

(see degree sheets for specified ensembles)

Recital attendance

Four semesters of Mus. P. 050

Plus Mus. P. 400, Senior Recital

Music Requirements

Area

Hrs.

Applied music

16

Vocal majors (voice)

14

(piano)

2

Keyboard and instrumental majors

14

(chief medium)

2

(guitar recommended)

4

*These courses are taken during the student teaching semester.

Additional Courses Required for Special Music Education Emphasis (Vocal or Instrumental)

Area

Hrs.

Music Education

13

Mus. E. 203, 241, 242, 303, 403*, 611, 342

Music Education Methods

403, 241, 42, 342, 611

Mus. E. 204, 304, 404, 235, 236, 237, 238,

239, 240, 686, 341, or 1 hour voice,

342, 611

Additional courses for piano pedagogy majors: Mus. P. 580 (2 hrs) and 790 (4 hrs)

Bachelors of Arts in Music

Students who wish a Bachelor of Arts in music are required to complete courses in Fairmount College of Liberal Arts and the College of Fine Arts as indicated in the music degree check sheets and to elect 50 music hours as specified in the following areas and course listings.

Area

Hrs.

Group I

Music Literature and History

9

Mus. C. 113Q and six hours in additional music, history, and literature courses such as Mus. C. 334Q-335Q, 346Q, 624, 726, 753-754.

May not use courses counted in General Education requirement.

Group II

Music Theory

20

Mus. C. 127Q-129, 128-130, 227-229, 228, 523, 561 or 661, 641

Group III

Conducting

2

Mus. P. 217 or 218

Group IV

Applied Music

6

Voice, piano, organ, guitar or orchestral instrument
includes discussions of teaching techniques, identification of problems peculiar to each instrument, care and minor repair, instructional materials, need selection and adjustment, instrument brands, and the development of sufficient playing skills. Grades 4-12.

238. Methods of Teaching Band and Orchestral Instruments (Flute and Double Reeds). (1). Prepares the prospective instrumental music instructor to effectively teach flute and double reeds in the public school setting. Includes discussions of teaching techniques, identification of problems peculiar to each instrument, care of instrument, instructional materials, instrument brands, and the development of sufficient playing skills. Grades 4-12.

239. Methods of Teaching Band and Orchestral Instruments (Brass). (1). Procedures and materials for class and private teaching of all brass instruments, emphasizing tone qualities, differences in embouchure and necessary techniques for performance. Grades 4-12.

240. Methods of Teaching Band and Orchestral Instruments (Percussion). (1). Procedures and materials for class and private instruction. Includes application of snare drum fundamentals and a study of basic techniques for all percussion instruments. Grades 4-12.


242. Wind and Percussion Rehearsal Methods. (1). Wind and percussion techniques and materials for grades 4 through 12. Required of majors on choral/keyboard program and choral/keyboard majors on special music education program.

272. Introduction to Professional Education. (1). Gives prospective teachers the opportunity to consider seriously their suitability for a career in education. Students begin to develop skill in observing educational situations and settings which help them develop a teacher perspective, seeing schools as prospective workplaces and teachers as colleagues. Prerequisites: C or better in English 1 and II, Communication, and College Algebra; sophomore standing, 2.750 GPA, in the 35th hour; and concurrent enrollment in CI 271.

281. Cooperative Education. (1-8). A field placement which provides work 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 and approved by appropriate faculty sponsors and cooperative education coordinators. Students may follow one of two scheduling patterns: full-time, enrolling concurrently in a minimum of six hours of course work in addition to their co-op assignment; alternating, working full time one semester in a field study and returning to full school enrollment the following semester; such students need not be concurrently employed in any other course. Prerequisite: successful completion of the freshman year and satisfactory academic standing prior to the first job assignment. May be repeated for credit. Offered Cr/NCr only.

Upper-Division Courses

303. Survey of Vocal Music for Elementary Schools. (3). An overview of activities in the elementary general music program. Includes a study of objectives for elementary classes and consideration of materials and methods. Includes autoharp, recorder techniques, and music theatre for public schools. For students primarily interested in teaching music in the elementary schools. Prerequisite: Mus. E. 203. Grades K-8.

304. Survey of Instrumental Elementary School Music. (3). A survey of methods and materials in the elementary school instrumental program of instruction. For students primarily interested in teaching instrumental music in the elementary schools. Prerequisite: Mus. E. 204. Grades 4-8.

309. Survey of Music for Special Education. (3). Consideration of methods and problems in preparation for student teaching of music with special education students at early childhood, elementary, and secondary levels in public schools. Includes musical settings (self-contained and mainstreamed) and alternative settings. Includes a survey of the special education curriculum. Also includes observation, demonstration-presentation experiences, and/or media presentations. Prerequisites: Mus. E. 203 or 204 with instructor's consent. Grades K-12.

341. Survey of Singing Techniques and Literature. (1). Vocal problems and strategies and the development of sufficient vocal skill to assure effective use of the voice in demonstrating vocal technique. Experience in using the singing voice as a teaching tool. Includes a survey of literature for the solo voice. Required for instrumental, keyboard, and special music education majors, or may substitute 1 hour voice. Grades K-12.

342. Survey of Choral Techniques and Literature. (1). A study of basic techniques of ensembles and examination of literature for large and small ensembles. Includes fundamental concepts of music and practical information. Required for all music education majors. Prerequisites: one hour of applied voice or Mus. E. 341 and Mus. P. 217 or 218. Grades 6-12.

351. Music Fundamentals for the Classroom Teacher. (2-3). For students planning to teach in the elementary school classroom. Includes basic fundamentals of music emphasizing development of student's music ability in singing, playing the piano and classroom instruments.

403. Advanced Techniques of Vocal/General School Music. (3). Emphasizes special problems related to preparation for student teaching - consideration of the vocal and general music programs at all levels. Includes vocal and general music education majors. Includes content area reading modules. To be taken during student teaching semester. Grades K-12.

404A. Advanced Techniques of Instrumental School Music. (3). Consideration of special problems related to preparation for student teaching in instrumental music programs at all
levels. Prerequisites: Mus. E 204 and 304; also 309 for special music education majors. Includes content area reading modules. To be taken during student teaching semester.

Grades 4-12.

#### Courses for Graduate/Undergraduate Credit

- **511. Jazz Pedagogy. (2)**. For both music education and music performance majors interested in teaching improvisation, jazz history and large and small jazz ensembles. Includes a review of current jazz methods and materials, rehearsal techniques for jazz ensembles, how to listen to jazz, lectures by visiting jazz performers and effective jazz programming. Prerequisite: completion of Mus. C 220 or instructor's consent.

- **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.

- **611. Music for Special Education. (3)**. Open to upper-division or graduate students and intended for the potential practicing music teacher, classroom teacher or special education teacher. Includes identification of dysfunctional 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.

- **686. Marching Band Techniques. (2)**. A systematic approach to the marching band with regard to organization, show development, instrumentation, music adaptation, drill construction and script development. Teaches both traditional drill and corps style marching 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.

- **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.

- **737A. Advanced Woodwind Techniques. (2)**. Special problems and techniques in the teaching of woodwind instruments. Surveys current materials. Prerequisites: Mus. E 237 and 238 or equivalent.

- **739A. Advanced Brass Techniques. (2)**. Special problems and techniques in the teaching of brass instruments. Surveys current materials. Prerequisite: Mus. E 239 or equivalent.

- **740A. Advanced Percussion Techniques. (2)**. Special problems and techniques in the teaching of percussion instruments. Surveys current materials. Prerequisite: Mus. E 240 or equivalent.

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

- **781. Cooperative Education. (1-8)**. A field placement which integrates course work 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 and approved by appropriate faculty sponsors and cooperative education coordination. Students enrolled in Co-op 781 may follow one of two scheduling patterns: parallel, enrolling concurrently in a minimum of six hours of course work in addition to their co-op assignment; alternating, working full time one semester in a field study and returning to full school enrollment the following semester; such students need not be concurrently enrolled in any other course. Prerequisite: satisfactory academic standing prior to the first job assignment. May be repeated for credit. Offered CR/NC only.

- **785. Instrumental Music Organization and Administration. (2)**. Problems of developing school instrumental music programs.

- **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**

- **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.

- **822. Advanced Techniques in Special Music Education. (3)**. For the 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 dysfunctional 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: Mus. E 403 or 404.

- **823. Special Music Education Practicum. (3)**. For the special music education MME candidates only. Supervised teaching in special education classrooms. A companion course to Mus. E 822; gives the MME special education candidate experience in teaching in special education classrooms. Prerequisite: Mus. E 822 or concurrent enrollment.

- **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: Mus. E 403.


- **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.

- **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.

- **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.

- **845A. Seminar in Instrumental Music Education Literature. (2)**. Critical analysis of literature for band, orchestra and small ensembles in elementary and secondary schools. Uses current bibliography. Repeatable for credit.

- **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.

- **852. Introduction to Bibliography and Research. (3)**. See course listing under musicology-composition area.

- **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: Mus. C 852.

- **875. Thesis Research. (1-2)**.

- **876. Thesis. (2)**.

### Music Performance

#### Applied Music Private Study

- **112. Applied Music Instruction for Nonmajors. (2)**. Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable.

- **231. (1)**. For majors only; study on secondary instruments. Basic instruction. Repeatable for credit. Lower division.

- **232. (2)**. For majors only. Repeatable for credit. Lower division.
Applied Music Classes

113P. Piano Class. Level 1. (1). Non-piano music majors. Class piano prepares the student to pass the piano proficiency exam. Required of all music majors. Repeatable for credit. Prerequisite: class placement interview.

114P. Piano Class. Level 2. (1). Non-piano music majors. Repeatable for credit. Prerequisite: class placement interview.

115P. Piano Class. Level 3. (3). Non-piano music majors. Repeatable for credit. Prerequisite: class placement interview.

116P. Piano Class. Level 4. (1). Non-piano music majors. Repeatable for credit. Prerequisite: class placement interview.

117G. Guitar Class. (2). Beginners. Repeatable.

117P. Piano Class. (1). Non-piano music majors. Prerequisite: class placement interview. Repeatable.

117W. 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.

117Y. 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, and includes information via lecture, demonstration, listening to recordings related to stylistic differences in the popular idioms. Intended for nonmusic majors and will not be applicable to music degree requirements. Repeatable.

118F. Guitar Class. (2). Intermediate. Repeatable.

118P. Piano Class. (1). Non-piano music majors. Prerequisite: class placement interview. Repeatable.

119P. Piano Class. (1). Piano majors. Prerequisite: class placement interview. Repeatable.

120P. Piano Class. (2). Nonmajors. Repeatable.

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.

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, and includes information via lecture, demonstration, listening to recordings related to stylistic differences in the popular idioms. Intended for nonmusic majors; not applicable to music degree requirements. Repeatable.

General Performance

Noncredit Courses

050. Recital. (1). Recital attendance and performance. Laboratory observation of performance media, literature, and recital techniques. Eligible is required for BA and BM majors according to the requirements of the degree checklist at the time of enrollment. Repeatable.

080. Topics in Music. (1-3). Topics exploring events, conditions, relationships, styles, etc. in music. See Schedule of Courses for current listing. Not applicable to degree. Repeatable.

Lower-Division Courses

107-207. Piano Repertoire. (1-1). Gives performing and listening experience to piano majors. Repeatable for credit.

121. Italian Diction. (1). For the vocal performer, including a comprehensive study of Italian consonant and vowel sounds.

122. English Diction. (1). For the vocal performer, including a comprehensive study of English consonant and vowel sounds.

148. Double Reed Making and Adjusting. (1). Making and adjusting oboe, English horn, and bassoon reeds. Repeatable for credit. Prerequisite: Mus. E. 238 or instructor's consent.


210-211-212-213-214. Ensembles. (1-1-1-1-1). (A) Orchestra; (B) Symphonic Band/Wind Ensemble; (C) Gospel Ensemble; (D) Cappella Choir; (E) University Singers; (F) Concert Chorale; (G) Banda Hispanica; (J) Piano Accompaniment; (L) Madrigal Singers; Chamber Singers; (N) Woodwind Ensemble; (O) Saxophone Quartet; (P) Brass Chamber Ensemble; (R) Percussion Ensemble; (S) Beginning String Ensemble and String Chamber Ensembles; (T) Jazz Arts Ensembles I and II; (V) Guitar Ensemble; (W) International Choir; (X) New Music Ensemble. Prerequisite: audition required. Repeatable for credit.

211K. Opera Theatre. (1). Provides the opportunity for students to gain performance experience as a chorus member in fully staged, high quality productions of a diverse repertory with orchestra accompaniment. Prerequisite: audition required. Repeatable for credit.

212K. Opera Theatre. (2). Provides the opportunity for students to gain performance experience as a supporting cast member in fully staged, high quality productions of a diverse repertory with orchestra accompaniment. Prerequisite: audition required. Repeatable for credit.

217. Instrumental Conducting. (2). Fundamentals of baton technique, elementary score reading and musical leadership. Practical experience in conducting laboratory and classroom groups. Prerequisites: Mus. C. 128 and 130.

218. Choral Conducting. (2). Fundamentals of conducting, score reading, and rehearsal techniques. Practical experience conducting choral groups. Prerequisites: Mus. C. 128 and 130.

221. German Dictation. (1). For the vocal performer, including a comprehensive study of German consonant and vowel sounds.

222. French Dictation. (1). For the vocal performer, including a comprehensive study of French consonant and vowel sounds.


250-251. Applied Piano Concerto. (2-2). Gives students concert experience in accompanying as a member of the BM performance program.

281. Cooperative Education. (1-8). A field placement which integrates course work 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 and approved by appropriate faculty advisors and cooperative education coordinators. Students may follow one of two scheduling patterns: parallel, enrolling concurrently in a minimum of six hours of course work in addition to their co-op assignment; alternating, working full time one semester in a field study and returning to full school enrollment the fol-

300. Junior Recital. (1). Required for BM piano majors, performance or accompanying emphasis. Prerequisite: departmental consent.


400. Senior Recital. (1). Prerequisite: departmental consent.


411K. Opera Theatre. (1). See Mus. P. 211K.

412K. Opera Theatre. (2). See Mus. P. 212K.

414K. Opera Theatre. (4). Provides the opportunity for students to gain performance experience with a major role in fully staged, high quality productions of a diverse repertoire with orchestra accompaniment. Prerequisite: audition required. Repeatable for credit.

415Y. Voice for Music Theater. (2). Basic repertoire and singing techniques with weekly master class devoted to music theater techniques and concepts. Not applicable to music degree requirements. Repeatable.


450-451. Accompanying Recital. (1-1). Required for BM piano majors, accompanying emphasis. Prerequisite: departmental consent.


Courses for Graduate/Undergraduate Credit

580. Piano Pedagogy. (2). Primarily concerned with the art and science of teaching. Includes observations of master teachers in the University and community.


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.

625. Voice Pedagogy. (2). Acquaints the voice major with vocal techniques, concepts and materials of private and class instruction.

651. Advanced Conducting and Score Reading. (2). Baton technique, score reading and musicianship. Prerequisite: Mus. P. 217 or 218 or equivalent.

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.

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.

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.

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: Mus. P. 217 or 218 or equivalent.


710-711-712-713-714. Ensembles. (1-1-1-1-1). (A) Orchestra; (B) Symphony Band/Wind Ensemble; (D) Gospel Ensemble; (F) A Cappella Choir; University Singers; Concert Chorale; (H) Banda Hispanica; (J) Piano Accompaniment; (L) Madrigal Singers; Chamber Singers; (N) Woodwind Ensemble; (O) Saxophone Quartet; (P) Brass Chamber Ensemble; (R) Percussion Ensemble; (S) Beginning String Ensemble and String Chamber Ensemble; (T) Jazz Arts Ensembles I and II; (V) Guitar Ensemble; (W) International Choir; (X) New Music Ensemble. Prerequisite: audition required. Repeatable for credit.

711K. Opera Theatre. (1). See Mus. P. 211K.

712K. Opera Theatre. (2). See Mus. P. 212K.


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.


760. Group Piano Practice. (2). Supervised piano group teaching for graduate students. Prerequisites: Mus. P. 580 and 581.


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.

773. 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.

790. Special Topics in Music. (1-4). For individual or group instruction. Repeatable with departmental consent.

Courses for Graduate Students Only

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.

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.

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: Mus. P. 580.

852. Introduction to Bibliography and Research. (3). See course listing under musicology-composition area.

873. Graduate Recital. (2). Performance of a full recital featuring the chief performing medium. Prerequisite: consent of instructors in applied area.

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. 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 also will be required to perform a major piano work, prepared at acceptable recital level, during semester jury examination within the final year (two semesters) of the degree program. Requires approval of piano performance area faculty. Prerequisite: departmental consent.

Musicology-Composition

Lower-Division Courses

060. Fundamentals of Music. (1). Intended for those who do not read music and/or who need additional help in the fundamentals of music. Includes the staff, clefs, keys, meter, tempo, notes, rests, and other basic knowledge.

113Q. Introduction to Music Literature. (3). An introduction to the masterpieces of music literature. Includes comparison of contrasting styles of both Western and non-Western music.
For general students with some musical background to 160G. Required for music majors.

114. Music Literature Survey. (2). A survey of representative works from the vocal and instrumental repertoire. Prerequisite: Mus. C. 113Q or instructor's consent.

127Q. Theory I. (2). Fundamentals of music, melodic writing and analysis, elementary melodic formal structures (cadence, phrase, period), basic orchestration, and simple harmonic background and contrapuntal relationships applied to literature from all periods of music. Studies one selected score being performed during the semester by a University ensemble. Prerequisite: concurrent enrollment in Mus. C. 129.

127H. Theory I Honors. (2). Fundamentals of music, melodic writing and analysis, elementary melodic formal structures (cadence, phrase, period), simple harmonic relationships, and fundamental voice-leading techniques. Prerequisites: concurrent enrollment in Mus. C. 129 and departmental consent.

128. Theory II. (2). A continuation of Theory I. Formal expansion includes binary and ternary structures. Further elaborates basic harmonic structures. Studies another score being performed by a University ensemble. Prerequisites: Mus. C. 127Q and concurrent enrollment in Mus. C. 129 or 130.

128H. Theory II Honors. (2). Formal expansion includes binary and ternary structures. Further elaborates basic harmonic structures. Prerequisites: Mus. C. 127Q or 127H, concurrent enrollment in Mus. C. 129 or 130 and departmental consent.

129. Aural Skills I. (2). Recognition, singing, and dictation of melodies from all periods of music. Emphasizes interval training. Instruction assisted by computer. Partially fulfills State Certification and Teacher Education Regulation gl-1:80: "the ability to teach reading skills appropriate to the level of the student and to the subject content."

130. Aural Skills II. (2). Continuation of melodic, rhythmical perception. Includes recognition and dictation of diatonic harmonic structures. Instruction assisted by computer. Partially fulfills State Certification and Teacher Education Regulation gl-1:80: "the ability to teach reading skills appropriate to the level of the student and to the subject content."

>160G. The Heritage of Western Music. (3). General education introductory course. Acquaints the nonmajor with the central tradition of Western music. Emphasizes the development of listening techniques by which the student may perceive and understand fundamental musical processes as they exist in the various styles within the Western heritage.

>161. Music through the Ages. (3). General education further studies course. Open to all students, particularly those involved in alternative schedules. Helps students develop the capacity for critical music listening and an appreciation for all musical styles. Television course.

>162G. World Music. (3). General education introductory course. A view of music as a global and cultural art form. For the general student to better understand the importance and significance of music in all world cultures.

>165. The Blues: Art and Culture. (3). General education further studies course. Cross-listed as Anthr. 165. The blues is a uniquely American musical form that has made an immense contribution to world popular culture. The history of the blues also reflects the history of Black America from the late 19th century to the present day. Includes music of major blues artists, both rural and urban, to trace the history and development of the blues as a folk art form that expresses both the joy and the despair of the people who created it.

227. Theory III. (2). The study of contrapuntal forms and textures from music of all periods. Explores melodic, harmonic, and rhythmic aspects of this music, as well as basic orchestration techniques related to these textures. Includes study of an appropriate score being performed by a University ensemble. Prerequisite: Mus. C. 128.

228. Theory IV. (2). Study of the larger homophonic forms (sonata, rondo) using techniques acquired in previous semesters. Includes analysis of an appropriate score being performed by a University ensemble. Partially fulfills State Certification and Teacher Education Regulation gl-1:80: "the ability to teach reading skills appropriate to the level of the student and to the subject content." Prerequisite: Mus. C. 227.

229. Aural Skills III. (2). Recognition, singing, and dictation of contrapuntal textures with continued harmonic practice emphasizing elementary chromaticism. Instruction assisted by computer. Partially fulfills State Certification and Teacher Education Regulation gl-1:80: "the ability to teach reading skills appropriate to the level of the student and to the subject content." Prerequisite: Mus. C. 130.

230. Aural Skills IV. (2). Summation and expansion of previous skills further emphasizing harmonic chromaticism and atonal contexts. Instruction assisted by computer. Partially fulfills State Certification and Teacher Education Regulation gl-1:80: "the ability to teach reading skills appropriate to the level of the student and to the subject content." Prerequisite: Mus. C. 229.

245. Jazz Improvisation. (2). Melodic, harmonic and rhythmic creation emphasizing the relationship of scale patterns and seventh chords. Repeatable for credit. Prerequisites: Mus. C. 128 and 130 or instructor's consent.

259 & 260. Applied Composition. (2-2). Individual study in fundamentals of musical composition emphasizing the development and expansion of music materials. May be taken as an elective. May be repeated as an elective by those not majoring in theory-composition. Prerequisite: Mus. C. 127Q or equivalent and instructor's consent.

Upper-Division Courses

>310. Interrelated Arts. (3). General education issues and perspectives course. Presents an aesthetic analysis of three fine arts. Emphasizes style and commonality among the fine arts (art, music, drama).

315. Music of the 20th Century. (2). An aesthetic approach to music of this century, its major composers, and stylistic and formal characteristics. Primarily for the nonmusic major who has musical interest and background.

320G. Movie Musicals. (3). Covers the unique development of the musical within the media genre of film. Traces historical development, emphasizing technical progress, music, cinematography, and the genre as a reflection of American life.

>325. Periods of Music History. (3). General education further studies course. For nonmajors. Content changes from semester to semester. Focuses on topics within the Western classical musical tradition, such as periods, places, and styles. Prerequisite: Mus. C. 160G.

>331Q. History of Music I. (3). General education further studies course. A survey of the evolution of musical styles and practices in the Western world through ca. 1750. Includes lectures, reference readings, and the study of representative examples of music. Prerequisites: Mus. C. 113Q and 228 or instructor's consent.

>333Q. History of Music II. (3). General education further studies course. A survey of the evolution of musical styles and practices in the Western world from ca. 1750 to the present. Includes lectures, reference readings, and the study of representative examples of music. Prerequisites: Mus. C. 113Q and 228 or instructor's consent.

345. Jazz Arranging. (2). Arranging for small and large jazz ensembles emphasizing current big band styles. Prerequisites: Mus. C. 228 and 230 or instructor's consent.

>346Q. Styles of Jazz. (3). General education further studies course. A survey of all eras in the evolution of the many styles in the jazz idiom from the end of the 19th century to the present. Open to majors and nonmajors.

400. Composition Recital. (1). Presentation for public performance of a selection of compositions representing large and small forms, totaling a minimum of 20 minutes performance time. Must be concurrently enrolled in Mus. C. 559/560 or 659/660. Prerequisite: departmental consent.

>493G. American Popular Music. (3). General education further studies course. Focuses on music of the popular culture in this country from colonial times into the 20th century and representing a melding of social, political, artistic, and historical elements of many diverse cultures.

Courses for Graduate/Undergraduate Credit

523. Form and Analysis. (2). Extensive analysis of the forms and formal processes of musical literature. Prerequisite: Mus. C. 228.

toward musicians who wish to use the electronic medium in teaching, performing or communicating through music in any way.


561. 16th Century Counterpoint. (2). Counterpointal devices of the 16th century as found in the works of J.S. Bach. Prerequisite: Mus. C. 228.


597-598. Organ Literature and Practice. (1-2). 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 improvisation. Required of all organ majors. Repeatable. Prerequisite: Mus. C. 228 or departmental consent.

616. Symphonic Literature. (3). General education further studies course. 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 Mus. C. 334Q and 335Q.

623. Opera Literature. (3). General education further studies course. A comprehensive survey of Italian, German, French, Russian, English and American opera literature from the 17th century to the present. Mus. C. 113 is strongly recommended before taking the course. Should be only upper division or graduate students. Not limited to music majors.

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.

641. Orchestration. (3). The study of instrumentation, emphasizing idiomatic scoring for various instrumental combinations with an approach to the problems of full orchestra and band scores. Prerequisite: Mus. C. 227.

645. Choral Arranging. (2). Scoring for women’s, men’s and mixed choruses. Includes performance and analysis of student’s arrangements in class. Prerequisites: Mus. C. 228 and 230.

660. Applied Composition. (2). Individual study in musical composition emphasizing writing for both small ensembles and large groups in the larger forms. Repeatable. Prerequisite: Mus. C. 560 and instructor’s consent.

661. 16th Century Counterpoint. (2). Analysis and application of the contrapuntal composition techniques of the 16th century. Prerequisite: Mus. C. 228.

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: Mus. C. 228.

672. Contemporary Techniques. (2). Advanced study of music from impressionism to the present emphasizing related literature and creative writing. Prerequisite: Mus. C. 228.

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.

705. 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.

726. Voice Literature. (3). A comprehensive survey of early Italian arias. French chansons, German lieder, contemporary English songs and Russian and Spanish literature.

750. Musicology-Composition Workshop (1-4). Repeatable for credit. Prerequisite: instructor’s consent.

753. Choral Literature I. (2). A historical and stylistic survey of choral literature of the Renaissance and Baroque eras.


790. Special Topics in Music. (1-4). For individual or group instruction. Repeatable with departmental consent.

791-792. Seminar in Music History. (3-3). Develops areas of interest in music history as time permits. Makes no effort at a chronological survey. Includes ideas evoking the most interest and considered by the instructor to be of the greatest professional benefit when interest warrants.

Courses for Graduate Students Only

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.

840A-C. Seminar in the Techniques of Composition. (2). Examines the nature of compositional techniques through selected works in different media: (A) large ensembles, (B) small ensembles and (C) solo literature. Prerequisites: Mus. C. 671, 672 and 641, or departmental consent.

841-842. Special Project in Music; (1-3) 1-3. Individually supervised study or research emphasizing the professional needs of the student. Repeatable for credit. Prerequisite: instructor’s consent.

852. Introduction to Bibliography and Research. (3). Techniques of research and development of bibliography in music and music education. Course must be elected the first available semester of enrollment in MM or MME programs.

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


876. Thesis. (2).

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

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

895. Music of the 18th Century. (3).

896. Music of the 19th Century. (3).

897. Music of the 20th Century. (3).

School of Performing Arts

Leroy W. Clark, Chair

The School of Performing Arts includes the areas of dance and theatre. The school offers the Bachelor of Fine Arts in Performing Arts/Dance and Bachelor of Fine Arts in Performing Arts/Theatre.

All candidates for the BFA degree must complete the following core courses: Theatre 253, Costuming for the Stage; and Theatre 345, Stage Lighting.

Dance

Major emphasis is placed on modern dance technique with strong supportive classes in ballet and jazz. Major course offerings include study in modern, ballet, and jazz techniques; tap; choreography; dance history; dance kinesiology; repertory; music for dance; lighting; and costume. Additional classes are offered in music theatre dance, mime, ballroom, country-western, and other special forms.

The Mid-America Dance Theatre (MADT), the resident faculty-student performance company, presents at least two fully produced concerts annually and acts to produce guest residencies with internationally recognized dance artists, lecture demonstrations for area schools, master classes, an annual undergraduate dance concert, informal showings, and senior choreography concerts. Membership in MADT is by audition only.

Any student who intends to pursue dance as a major should contact the director of dance early in their educational career for assignment to an academic advisor.

Graduation Requirements

Dance majors must complete two semesters of Dance 501, Modern Dance
IV, and one semester of Dance 410, Ballet III, with a minimum grade of B. A minimum of 42 hours is required in technique with at least 24 hours in modern dance technique. Proficiency exams are available for those with a developed technical skill. Students are encouraged to take concurrent ballet and modern dance technique classes each semester they are enrolled. Contact the director of dance for consideration of exception.

Advancement in technique is not automatic and is possible only with faculty consent and approval. Students will be placed at the technical level the dance faculty feel is appropriate for their individual growth and development. Students with a developed skill in one dance technique should not expect that ability to translate into the same level of skill in other techniques of dance.

All dance majors are required to perform in MADT and/or dance program productions each semester. Junior and senior dance majors who are not accepted in MADT are required to perform in an approved dance-sponsored performance. This requirement does not apply to senior dance majors during the semester in which they present their senior concert. Approval for dance majors to perform in off-campus productions, which may conflict with dance program or MADT events, is made on a case-by-case basis. While we encourage students to work professionally as part of their training, we do not feel this should be done at the regular expense of student involvement in dance program/MADT productions. Students accepted in MADT may register for Dance 320, Dance Performance, each semester.

All majors present a senior choreography concert to include choreography and performances determined in consultation with your major advisor and the director of dance. The dance faculty work with each student to create the best "fit" between student goals and interests in choreography/performance and faculty appraisal of each student's needs for true artistic development. We seek to produce graduates who will be competitive with graduates of any other outstanding BFA training program in the country. At least half of the concert must be choreographed by the student. The total length of the concert should be between 25 and 30 minutes. A written documentation of the choreography (including major artistic influences, compositional constructs used and approaches to choreography/ performance) is supported by a creative notations of the project. These materials are submitted to the major advisor for approval. Following approval by the major advisor, students are scheduled for an oral defense of their work before the dance major faculty.

Bachelor of Fine Arts

The general graduation requirements of the University must be met as described in the Academic Information—Requirements for Graduation section of the Catalog. In addition, the following course requirements must be met.

Course                         Hrs.
Dance 201, Modern Dance Technique I; Dance 301, 401, 501, Modern Dance II, III, IV. (Placement and advancement by audition and/or faculty consent only)..........................24
Dance 210, 310, 410, Ballet I, II, III, (Placement and advancement by audition and/or faculty consent only).................................................18
Dance 120, 220, Jazz I, II..........................4
Dance 105, 205, 505, Choreography I, II, III..................................................9
Dance 225Q, Survey of Dance History..........................................................3
Dance 130B, Tap I...........................................2
Dance 315, Music for Dance.................................................................3
Dance 320, Performance...............................................................24
Dance 415, Dance Kinesiology.................................................................3
Thea. 253, Costuming for the Stage..........................4
Thea. 345, Stage Lighting.................................................................4
Total.................................................................78

In addition to the above required courses, a minimum of 6 hours should be selected from the following theatre, music, art, and dance courses with at least 3 hours in two disciplines.

Thea. 143G, The Art of the Theatre; 243Q, Acting I; 244, Stagecraft; 254, Stage Makeup; 623Q, Development of the Theatre I; or 624Q, Development of the Theatre II
Mus. C. 160G, The Heritage of Western Music; 315, Music of the 20th Century; or 346Q, Styles of Jazz
Art H. 122G, Survey of Western Art: Renaissance and Baroque; 124, Survey of Western Art: Modern; 525, 20th Century Art Before 1945; 526, Art Since 1945; or Art F. 136, Foundation Design I
Dance 130J, Advanced Tap; 227 Mime, 230, Theatre Dance I; 330, Theatre Dance II; 335, Jazz III; 545, Methods of Teaching Dance; 605, Choreography for the Musical Theatre; 645, Practice in Teaching Dance
The remaining hours should be selected to fulfill General Education program requirements.

Dance Minor

A minor in dance consists of the following: 105, 120, 140, 201, 210, 225Q, 301, and 320.

Lower-Division Courses

105. Choreography I. (3). Focuses on the choreographic process. Students are required to do contextual studies which may include time, space, energy, design, dynamics, rhythm, motivation, sequencing, phrasing, movement qualities, and transitions. Prerequisites: One semester of modern dance and equivalent to intermediate technical level. Concurrent enrollment in appropriate-level modern dance or ballet technique class required. 120. Jazz. (1-2). Introduces jazz technique, emphasizing work in body isolation, rhythmic patterns and directions, basic steps, and history and development of jazz dance in America. Repeatable for credit.

130. Varieties of Dance. (1-2). No previous experience in dance required. A different form of dance may be offered each semester. Repeatable for credit.

130B. Tap I. (2). Introduces the principles of tap dancing including rhythm, clarity of sound, syncopation, and weight shift.


150. Dance Workshop. (1-4). Repeatable for credit.

201. Modern Dance Technique I. (2-3). Introduces study of basic positions, body alignment, stretches, and strengthening exercises; emphasizes simple movement phrases to develop understanding of direction, rhythm, and dynamics. Repeatable for credit.

205. Choreography II. (3). Further work in improvisation and composition. Culminates in a performance of solo works, duets, and small groups for an invited audience. Prerequisites: Dance 105 and concurrent enrollment in appropriate-level modern dance or ballet technique class.

210. Ballet I. (2-3). Introduces basic technique, positions, basic steps, proper body alignment, classroom structure, and etiquette and ballet vocabulary. Repeatable for credit.

220. Jazz II. (1-2). Continuation of Dance 120 at intermediate level. Repeatable for credit. Prerequisite: instructor's consent or by audition.

225Q. Survey of Dance History. (3). General education further studies course. Overview of dance history emphasizing the development of the western tradition in social, cultural and concert dance forms from ancient Greece to the present, the origins of classical ballet, dance in the Americas, the development of modern dance and current trends in "world dance."
227. Mime/Physical Theatre I. (2). An introductory course in crafting non-verbal theatre to create conceptual statements, short plays, and abstract movement art. Student experiences gesture, isolation, flexibility, strength, emotional expression, genuine acting, and fundamental mime theatre skills to see the range and possibilities in communicating non-verbally. Enhances both acting and dancing skills.

230. Musical Theatre Dance I. (2). Introduces various musical theatre dance styles from different historical periods including social dance styles from 1900s through 1980s. Includes the dance audition and how to prepare and market the dancer for the stage. Repeatable for credit. Prerequisite: Dance 120 and/or instructor's consent.

Upper-Division Courses

301. Modern Dance II. (2-3). Continuation of Dance 201 emphasizing movement phrases. Intermediate level. Repeatable for credit. Prerequisite: instructor's consent or by audition.

310. Ballet II. (2-3). Continuation of Dance 210. Intermediate level. Repeatable for credit. Prerequisite: instructor's consent or by audition.

315. Music for Dance. (3). General education further studies course. Study of tempo, meter, and quality of sound as applied to movement. Exploration of appropriate music repertoire for dance. Prerequisite: completion of two semesters of modern dance or ballet technique.

320. Dance Performance. (1). Perform in Mid-America Dance Theatre, Senior and/or Choreography concerts, or outside performances approved by dance faculty. Prerequisite: audition. May be repeated for credit.

330. Musical Theatre Dance II. (2). Continuation of Dance 230 and further refinement of musical theatre dance styles. Emphasizes knowledge of past and present renowned Broadway choreographers. Integrates original choreography into course work as well as performance methods. Repeatable for credit. Prerequisite: Dance 230 and/or instructor's consent.

335. Jazz Dance III. (2). Continuation of Dance 220 at a higher level of technical skill. Includes advanced kinetic memory, flexibility, isolation, sophisticated syncopation, and reflex. Prerequisites: Dance 120, 220, and/or instructor's consent.

401. Modern Dance III. (3). Continuation of Dance 301. Upper intermediate level. Repeatable for credit. Prerequisite: instructor's consent or by audition.

410. Ballet III. (3). Continuation of Dance 310. Upper intermediate level. Repeatable for credit. Prerequisite: instructor's consent or by audition.

415. Dance Kinesiology. (3). Introduces principles of kinesiology for dance. Includes anatomy, physiology and beginning course in the body therapies and movement analysis using modern concert dance as the reference model. Stresses structural and neuromuscular analysis of the human body as it responds to the demands of dance.

Courses for Graduate/Undergraduate Credit

501. Modern Dance IV. (3). Continuation of Dance 401. Advanced level. Emphasizes professional technique and performance quality. Repeatable for credit. Prerequisite: instructor's consent or by audition.

505. Choreography III. (3). Focuses on the choreographic process. Students create choreographic studies for more than one dancer utilizing elements studied in Choreography I and II, exploring different choreographic approaches. Further exploration may include environmental, chance, and collaborative choreographies and multimedia approaches. Prerequisites: Dance 205 and concurrent enrollment in appropriate-level modern dance or ballet technique class.


545. Methods of Teaching Dance. (3). Develops teaching skills for elementary schools, high schools, recreation centers, private and professional schools and universities through lesson planning and in-class teaching practice. Prerequisite: Dance 401 or 410.

605. Choreography for the Musical Theatre. (3). Introduces the process of choreography for the musical theatre from casting the chorus in a musical to staging a solo to choreographing an ensemble of 30 dancers. 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: Dance 330 or instructor's consent.

645. Practice in Teaching Dance. (3). Actual placement in teaching situation with responsibility of teaching ballet, modern and/or jazz in private studios, elementary, high schools, Ys or recreation centers. Prerequisite: Dance 545.

690. Special Topics in Dance. (1-6). For individual or group instruction. Repeatable for credit with departmental consent.

750. Dance Workshop. (1-4). Repeatable for credit.

Theatre

Theatre offers a broad academic program, balanced by the extensive production schedule of the University theatre—Mainstage; Second State; Readers Theatre; and Summer Theatre, a semi-professional company whose members are chosen by audition only. The music theatre program is a collaborative one in which students participate in musicals presented as part of the Theatre Series and the Opera Series, as well as in other performances in theatre, dance, and music.

Graduation Requirements

All theatre majors must participate in some area of the production of all University theatre plays, after consultation with faculty and staff. Students may choose one of four options: a BFA in performing arts/theatre performance, a BFA in performing arts/design and technical theatre, a BA in theatre, and a BFA in music theatre. In addition to the general education requirements, candidates for the BFA in performing arts must meet the following requirements.

Theatre Performance Track

A minimum of 80 hours, including Theatre 143G, 180, 221Q, 222, 225, 230, 241, 243Q, 244, 253, 254, 272, 345, 359, 380, 450, 455, 542, 623Q, 624Q, 643, 651, 728; with 3 hours chosen from the following: Theatre 218, Dance 201, Dance 210; and 6 hours chosen from the following: Theatre 516, 517, 559, 590, 675, or 725.

Technical Theatre and Design Track

A minimum of 80 hours, including Art 145, Theatre 143G, 180, 243Q, 244, 253, 254, 272, 345, 359, 380, 444, 450, 451, 544, 546, 623Q, 624Q, 647, 649, 653, 657, 728; with 3 hours chosen from the following: Theatre 375 or 675; and with 5 hours chosen from theatre electives.

Music Theatre

The BFA in music theatre requires a total of 134 hours, with a minimum of 92 hours in three disciplines: 28 credits in theatre, 30 in music, 26 in dance, and 8 in interdisciplinary courses. Theatre courses include: Theatre 165, 243Q, 254, 320, 542, 643, 651; any two of the following: Theatre 244, 253, 345, and one of the following: Theatre 222, 272, 375, 610. Dance courses include: Dance 120, 130B, 201, 210, 220, 230, 301, 310, 330; and at least 4 hours from the following: Dance 1301, 225Q, 335, 605. Music requirements include: Applied Music 232Y, 415Y, 432Y; Music Performance: 113P, 114P, 212F, 213F, 340; and Music Composition: 129, 130. Interdisciplinary courses include: Theatre 180E, 330, 380E, 530, 555, 630. In addition, music theatre majors will be expected to complete the 42 general education credits including Theatre 260 as their Introduction to Fine Arts course and Theatre 623Q as a Fine Arts Further Studies course.

Bachelor of Arts in Theatre

A minor in 42 hours in theatre, including the following required classes: Theatre 221Q, 243Q, 254, 359, 623Q, 624Q, 728, and 1 credit each of 180 and 380; 8
hours of Theatre 244, 253, and 345; and 12 hours of electives chosen from the remaining courses in the theatre curriculum, 6 of which must be upper-division.

Theatre Minor
A minor in theatre consists of the following required classes: Theatre 243Q, 244, 272, 359, 253, or 345 and 3 hours from the following: Theatre 450, 623Q, or 624Q.

Communication/Theatre
For the Master of Art in Communication/Theatre, see Communication.

Lower-Division Courses
>243Q. Acting 1. (3). General education further studies course. For the beginning student in theatre. Through exercises, analyses, and readings, the course contributes to the training of the student who wishes to prepare for study as an actor. Prerequisite: senior standing.


>253. Costuming for the Stage. (4). Lab arr. Introduces principles of costume design and construction. Touches on all aspects of the design process from creation of ideas to final product on stage. Includes approaches to research, costuming, design basics, and hands-on activities. Prerequisite: sophomore standing.

>254. Stage Makeup. (2). Study and practice of the basic application of stage makeup. Also includes character analysis, anatomy, materials, and special makeup techniques and problems.

>260. History of Musical Theatre. (3). A survey of the development of musical theatre from the early 1800s to present day. Examines the collaboration of composer, director, choreographer, and performers that make this an uniquely American art form.

>267. Stage Combat. (1). Teaching the techniques of safe unarmed combat on the stage. Techniques include execution of falls, rolls, punch, kicks, and the knap.

212. Improving Voice and Diction. (3). Cross-listed as Comm. 222. For students wishing to improve their speaking voices and gain greater control over their pronunciation of spoken English. Performance oriented, however, the anatomy of the vocal mechanism and the International Phonetic Alphabet are studied for practical application in the improvement of voice and diction.

222. Improving Voice and Diction. (3). Cross-listed as Comm. 222. For students wishing to improve their speaking voices and gain greater control over their pronunciation of spoken English. Performance oriented, however, the anatomy of the vocal mechanism and the International Phonetic Alphabet are studied for practical application in the improvement of voice and diction.

230. Dialects for the Stage. (3). Familiarizes the student with certain regional American and foreign dialects. Intended to be a practical guide for the student actor who is called upon to reproduce a particular dialect for performance. Prerequisite: Theatre/Comm. 222.

241. Improvisation and Theatre Games. (3). General education further studies course. For the beginning student in theatre. Through exercises, analyses, and readings, the course contributes to the training of the student actor's imagination, his/her sense of stage presence, and ability to explore basic components of playtexts.

243Q. Acting I. (3). General education further studies course. Empphasizes the internal techniques of acting, characterization, and the actor's analysis of the play and the role.


253. Costuming for the Stage. (4). Lab arr. Introduces principles of costume design and construction. Touches on all aspects of the design process from creation of ideas to final product on stage. Includes approaches to research, costuming, design basics, and hands-on activities. Prerequisite: sophomore standing.

254. Stage Makeup. (2). Study and practice of the basic application of stage makeup. Also includes character analysis, anatomy, materials, and special makeup techniques and problems.

260. History of Musical Theatre. (3). A survey of the development of musical theatre from the late 1800s to present day. Examines the collaboration of composer, director, choreographer, and performers that make this an uniquely American art form.

272. Stage and Theatre Management. (3). Acquaints students with the fundamentals of stage and theatre management. Students study all technical aspects of production (budgets, schedules, properties, etc.). In addition to classroom projects, students are required to work as a stage manager or an assistant stage manager for a theatre production. Prerequisite: sophomore standing.

Upper-Division Courses
344. Scene Design. (3). Fundamentals of scene design. Emphasizes strong work in perspective rendering, drafting techniques and scale, and playscript and spatial analysis.

345. Stage Lighting. (4). Lab arr. Light design and its relation to the production process and other design elements. Emphasizes working knowledge of lighting equipment towards creative implementation. Includes practical work on University Theatre Mainstage and Second Stage productions.

359. Directing I. (3). R; L arr. Basic theories and principles of stage directing and problems of producing the play with practical experience gained by use of the project methods. Prerequisite: Theatre 243Q, 244, 272 or departmental consent.

375. Directed Projects in Theatre. (2-4). Independent research or practical and creative projects in the various areas of theatre including production, design, technical theatre, management, and dramatic literature. Repeatable for credit to a maximum of four hours. Prerequisite: departmental consent.

380. Theatre Practicum. (1). Practical training in the organization and presentation of plays in the University Theatre program. May be organized in the following areas: design and construction of scenery, costumes, or properties; the design and execution of stage lighting or makeup; the organization and practice of theatre management, and performance. May be repeated once for credit.

385. Theatre as a Mirror of Today's America. (3). General education issues and perspectives course. Explores how contemporary drama reflects the issues and perspectives of different cultures and groups within America, including African Americans, Asian Americans, Hispanic Americans, the disabled, and women. Prerequisite: junior standing or departmental consent.

400. Theatre as a Mirror of Today's America. (3). General education issues and perspectives course. Explores how contemporary drama reflects the issues and perspectives of different cultures and groups within America, including African Americans, Asian Americans, Hispanic Americans, the disabled, and women. Prerequisite: junior standing or departmental consent.

455. Portfolio Review. (1). Senior level. Helps the technical theatre and design student prepare a formal portfolio in one area of the design areas, a resume, and a presentation as an application suitable for either graduate school or future employment. Prerequisite: must be taken in graduating year.


480. Theatre Internship. (3-15). Advanced theatrical production work as arranged by students in direction, acting, scenery and lighting, costume design and construction, or theatre management with a professional theatre company. Prerequisite: junior standing or departmental consent. Total of internship activity applicable toward graduation is 15 credits.

Courses for Graduate/Undergraduate Credit
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
544. Advanced Stagecraft. (3). R; L arr. Different design areas. Prerequisite: introductions for either Mainstage or Experimental sites: Theatre. 359 or departmental consent.

546. Scene Painting. (3). Presented with a lecture, the techniques of effective oral expertise (theatre, dance, music) to teach the student how to produce a musical. Prerequisite: instructor's consent.

559. Directing II. (3). R; L arr. Staging and rehearsal techniques emphasizing the problems of the period and stylized play. Prerequisites: Theatre. 259 or departmental consent and junior standing.

621. Advanced Oral Interpretation. (3). Intensive study and analysis of various forms of literature, the techniques of effective oral communication and the building of the individual or group concert recital. Arranged workshops and festivals. Prerequisites: Theatre. 221Q and junior standing.

622. Academic Theatre Practicum. (2). The investigation and exploration of the theatrical act in the classroom situation within the University community. Reinforces the researching, writing, directing and performing skills. Enrolled students, functioning as a company, produce and perform for various disciplines on campus. Repeatable once for credit.

623Q. Development of the Theatre I. (3). General education further studies 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.

624Q. Development of the Theatre II. (3). General education further studies 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.

643. Styles in Acting. (3). Training in, and development of, the special techniques required for period or stylized plays with special emphasis on Greek, Shakespearean, and Restoration styles. Prerequisites: Theatre. 243Q, 542 and junior standing.

647. Scene Design II. (3). Continuation of Theatre. 344 with more advanced work in designing settings for the stage and including studies in sceneographic and scenic design for work in theatre production. Prerequisites: Theatre. 244 and 344.

649. Stage Lighting II and Theatre Sound. (3). Continues the study and application of the techniques of Theatre. 345, emphasizing advanced concepts of design, and provides an introduction to theatre sound production. Prerequisite: Theatre. 345.

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 characterization in those scenes studied, integrating the elements of the actor's craft learned in the prerequisite courses. Prerequisites: Theatre. 643 and junior standing.

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: Theatre. 253 or departmental consent.

675. Directed Study. (2-4). Cross-listed as Comm. 675. Individual study or projects. Repeatable for credit with departmental consent. Prerequisite: departmental consent.

708. 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. Prerequisite: Junior standing or departmental consent. Total of internship activity applicable toward graduation is 15 credits.

Courses for Graduate Students Only

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 credits up to a total of six hours.

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 four hours of lecture.
College of Health Professions

Stephen C. Gladhart, EdD, and Bonnie J. Holaday, DNS, Interim Deans

The College of Health Professions was established in 1970. Programs of study are offered in dental hygiene, health services organization and policy, medical technology, nursing, physical therapist assistant, physical therapy, physician assistant, and public health. The primary emphasis of the college’s health professions programs is the preparation of entry-level health professionals. Additionally, the college provides such services as emergency medical training, continuing education, and graduate education for health professionals.

The curricula of the health professions programs build upon a foundation of courses from the liberal arts and sciences, education, health science, and business. In addition to the on-campus academic experience, health professions students learn in clinical settings as they care for patients and interact with clients of the health care system. All clinical programs are dependent upon the outstanding health care facilities within Wichita and surrounding areas.

Programs in the college are accredited through the following agencies: the Council on Dental Education of the American Dental Association, the Commission on Accreditation in Education of the American Physical Therapy Association, National League for Nursing, the Commission on Accreditation of Allied Health Education Programs, and the National Accrediting Agency for Clinical Laboratory Sciences.

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.

Essential functions/technical standards define the attributes that are considered necessary for students to possess in order to complete their education and training, and subsequently enter clinical practice. These essential functions/technical standards are determined to be prerequisites for entrance to, continuation in, and graduation from a student’s chosen discipline in the WSU College of Health Professions.

Students must possess aptitude, ability, and skills in five areas: observation; communication; sensory and motor coordination and function; conceptualization, integration, and quantification; and behavioral and social skills, ability, and aptitude. The essential functions/technical standards described by a student’s chosen discipline are critically important to the student and must be autonomously performed by the student. It should be understood that these are essential functions/technical standards for minimum competence in a student’s discipline. Contact specific programs for detailed essential functions/technical standards. Reasonable accommodation of disability will be provided after the student notifies the department of the disability and the disability has been documented by appropriate professionals.

Degrees Offered

Undergraduate

Of the programs offered at the undergraduate level, four lead to bachelor’s degrees—health services organization and policy, medical technology, nursing, and physician assistant.

In addition, the Associate of Science is awarded in dental hygiene and physical therapist assistant. Students in the emergency medical training programs receive a certificate of completion.

Graduate

Three programs lead to the master’s degree—public health, nursing, and physical therapy. Admission to the MPH program of study requires a bachelor’s degree and the fulfillment of additional requirements.

A Master of Science in Nursing (MSN) program, designed to meet the needs and professional goals of the student, is offered for part-time or full-time study. Clinical concentrations are offered in adult nursing, including medical-surgical and community health; parent-child nursing; psychiatric/mental health nursing; nursing administration; and family nurse practitioner. Role development in administration, teaching, clinical nurse specialist, nurse practitioner, or informatics is available.

An entry-level master’s program (MPT) is offered in physical therapy. The program prepares graduates to enter the clinical practice of physical therapy, where the focus is on clinical skills, education, research, and administration. Graduates are prepared to specifically evaluate and treat neuromuscular, musculoskeletal, cardiopulmonary, and sensorimotor functions.

More information on graduate programs is available in the Wichita State University Graduate Bulletin.

Policies

Undergraduate Admission

Students who have declared a major in one of the programs in health professions will be admitted directly to the College of Health Professions upon admission to WSU. Admission to the college does not guarantee acceptance into any of the undergraduate professional programs. To be admitted to a professional program, students must be accepted into Wichita State University and the College of Health Professions, apply for admission to a particular program, and be accepted by the admissions committee of that program. See the individual programs for application procedures.

Progression

To progress in courses offered in the clinical programs, students must earn an S, Cr, or C or better in both segments of the course in order to pass the course. Students who fail to meet these requirements may be dismissed from the program. If the student’s overall grade point average remains at 2.000 or above, the student may petition the Committee on Admission and Progression in his/her program to remain in the program. Students should check the individual program sections of the Undergraduate Catalog for additional requirements.

Probation and Dismissal

Students are placed on probation for the next term in which they enroll if their WSU grade point average falls below 2.000. Students remain on probation even though they earn a 2.000 grade point average in the term during which they are on probation if their WSU cumulative
grade point average is not at least 2.000. Probation is removed when a student's WSU grade point average meets the required academic level.

Students on probation may not enroll for more than 12 semester hours in the fall or spring semester, or five hours in the Summer Session, excluding one hour of physical education. Exception to this limitation may be made on the recommendation of a student's advisor with the approval of the dean of the college.

Students on probation are subject to academic dismissal from the college if their grade point average for the semester during which they are on probation falls below 2.000. Dismissal will not occur until students fail to achieve a 2.000 grade point average for the last 12 hours attempted while on probation.

Students assigned to affiliating health facilities for clinical education will be subject to dismissal from the professional program for failure to comply with the rules, regulations, or professional standards governing that facility.

Exceptions
Students may petition the program, college, or University for exception to any requirement. Students are required to discuss all petitions with their college/program advisor prior to submission of the petition. Petitions may or may not be approved by the body to whom the petition is made.

Graduation Requirements
All health professions students who are pursuing bachelor's degrees must meet general University requirements and fulfill the course requirements specified in the curriculum of the department offering the degree.

A minimum of 30 credit hours in course work in residence at WSU is required for all students seeking bachelor's degrees at WSU. In addition, these students must also complete all University, college, and departmental requirements for the degrees being sought. Completion of University courses is counted toward fulfillment of the residency requirement. For specific requirements, consult the individual program sections of the Catalog.

Credit by Examination
Some of the programs in the College of Health Professions offer equivalency or competency examinations. By taking these exams, students may earn credit or receive advanced placement. To qualify for such exams, students must:

1. Be accepted into the program (major) in which the course is offered as part of the professional curriculum.

2. Meet any other eligibility requirements stated by the particular program. (See the appropriate program's section in the Catalog.)

   Exception to these requirements may be granted to nonmajors by the chairperson/director of the program offering the course with the approval of the College of Health Professions Admissions-Exceptions Committee and the dean.

   Students should check with their program advisors regarding eligibility and prerequisite requirements for this type of examination. Transcripts will identify the courses and credits received by students taking equivalency/competency examinations. Fees are assessed, in advance, for the administration of the examinations.

Cooperative Education
The College of Health Professions is one of the participating colleges in the University Cooperative Education program. This program is designed to provide off-campus paid employment experiences that integrate, complement, and enhance the student's regular academic program while providing academic credit. Students are placed for field study experiences in a variety of health settings, including hospitals and community agencies. Individualized field studies are formulated in consultation with the student and the employer and are approved by the program faculty advisors and the cooperative education coordinator for the college. Participation in the program requires enrollment for credit in specific cooperative education courses designated by the various academic programs in the college; these undergraduate courses may have prerequisites or other specific requirements for enrollment. To enroll in the program or for more information, students should contact the college cooperative education coordinator or the program advisor.

Clinical Affiliation
The college, because of its location in Wichita, has affiliation agreements with various excellent health facilities which assist in the clinical education of students. The clinical affiliates include a wide variety of hospitals, long-term care facilities, public schools, private practitioners, and community agencies.

Liability Insurance Requirements, Health Insurance, and Health Standards
Most students are required to purchase professional liability insurance (the specific level is determined by the professional program) as well as personal health insurance at the beginning of the professional phase of a College of Health Professions program. Additionally, other health standards are required prior to entry into the clinical agencies. Students should communicate with individual programs about specific requirements.

Financial Assistance
Scholarships and student loan funds are available for students in health professions. Information on these and other scholarships and loans is available from the Wichita State University Office of Student Financial Planning and Assistance and the program from which the student is seeking a degree or certificate.

Special Certificate Program
The College of Health Professions offers a certificate program in basic emergency care training. It cooperates with the College of Education in offering a certificate program for school nurses (see Nursing).

Degree Requirements and Course Listings

School of Health Sciences
The School of Health Sciences offers programs leading to the Bachelor of Science in Health Services Organization and Policy, the Bachelor of Science-Medical Technology, and the Bachelor of Science-Physician Assistant.

In addition, the Associate of Science is awarded in dental hygiene and physical therapist assistant. Students in the emergency medical training program receive a certificate of completion.

Specific requirements for each degree are described under the appropriate listing below.

Basic Emergency Medical Care Training
A certificate in basic emergency medical care training is offered. The certificate is obtained with successful completion of EMT 110. Students who would like to enroll in this course must fulfill all requirements for admission to Wichita
State University and be at least 18 years old.

EMT 110 encompasses classroom instruction and ten hours of in-hospital observation. Successful completion of the course meets the educational prerequisite for taking the state and/or national registry examinations for emergency medical technicians.

**Lower-Division Course**

**110. Basic Emergency Medical Care Training.**
(10. 8R; 4L) Identifies principles of basic emergency medical care. Includes anatomy, physiology, and emergency recognition and care of medical emergencies and trauma-related injuries. Practicum and discussion provide the opportunity to apply these principles. Students also spend ten hours in hospital observation. Prerequisite: program or instructor's consent.

**Dental Hygiene**

**Associate of Science**

The associate degree program in dental hygiene provides students with knowledge of the social, dental, and clinical sciences and competencies needed by the dental hygienist in contributing to the attainment of optimum oral health for all people. Upon completion of the five-semester program (including one summer), students are eligible to take the national, regional, and state examinations for licensure as dental hygienists. The Wichita State University program is accredited by the American Dental Association's Commission on Dental Accreditation.

The Bachelor of Science in Health Services Organization and Policy degree is available to students who seek to expand their role in education or administration. Students interested in more information should contact the college dean's office student advisor.

**Professional Curriculum**

**Admission.** In addition to fulfilling all requirements for admission to the University, students wishing to enroll in the dental hygiene program may apply for, and obtain approval of, the Admissions Committee of the Dental Hygiene Department. Acceptance into the College of Health Professions does not guarantee admission into the dental hygiene program. Persons interested in the dental hygiene program should direct their inquiries to the Chairperson, Dental Hygiene Department, Wichita State University, Wichita, Kansas 67260-0144.

To qualify for admission to the dental hygiene program, applicants must be high school graduates or have passed the General Education Development test.

Students must meet the following admission criteria. They must:

1. Have taken or be enrolled in Biol. 223, Human Anatomy and Physiology; Chem. 103Q, General Chemistry; Eng. 101, College English I; Psy. 111Q, General Psychology; Biol. 220Q, Introduction to Microbiology; and HS 331Q, Principles of Dietetics and Nutrition
2. Maintain a minimum grade point average of 2.500 in all college work
3. Have a minimum grade of C in all prerequisite courses
4. Complete Wichita State University program and College of Health Professions general admission requirements.

Students must also have their admission approved by the program's committee on admissions.

**Curriculum.** The following courses, totaling 81 hours, must be taken by dental hygiene students.

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
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</thead>
<tbody>
<tr>
<td>Prerequisite courses for admission to the dental hygiene program:</td>
<td></td>
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<tr>
<td>Biol. 223, Human Anatomy and Physiology</td>
<td>5</td>
</tr>
<tr>
<td>Chem. 103Q, General Chemistry</td>
<td>4</td>
</tr>
<tr>
<td>Eng. 101, College English I</td>
<td>3</td>
</tr>
<tr>
<td>Psy. 111Q, General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>Biol. 120Q, Introduction to Microbiology</td>
<td>4</td>
</tr>
<tr>
<td>HS 331Q, Principles of Dietetics and Nutrition</td>
<td>4</td>
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</tbody>
</table>

**Plus the following:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comm. 111, Public Speaking</td>
<td>3</td>
</tr>
<tr>
<td>Soc. 111Q, Introduction to Sociology</td>
<td>3</td>
</tr>
<tr>
<td>DH 101, Preclinical Dental Hygiene</td>
<td>3</td>
</tr>
<tr>
<td>DH 104, Basic Radiology</td>
<td>4</td>
</tr>
<tr>
<td>DH 201, Dental Hygiene Concepts</td>
<td>3</td>
</tr>
<tr>
<td>DH 202, Clinical Dental Hygiene I</td>
<td>3</td>
</tr>
<tr>
<td>DH 206, General and Oral Pathology</td>
<td>3</td>
</tr>
<tr>
<td>DH 290, Oral Anatomy</td>
<td>1</td>
</tr>
<tr>
<td>DH 295, Oral Histology and Embryology</td>
<td>2</td>
</tr>
<tr>
<td>DH 301, Dental Materials</td>
<td>2</td>
</tr>
<tr>
<td>DH 302, Clinical Dental Hygiene II</td>
<td>2</td>
</tr>
<tr>
<td>DH 303, Dental Hygiene Concepts II</td>
<td>2</td>
</tr>
<tr>
<td>DH 304, Dental Hygiene Concepts III</td>
<td>2</td>
</tr>
<tr>
<td>DH 314, Introduction to Periodontics</td>
<td>2</td>
</tr>
<tr>
<td>DH 315, Advanced Periodontics</td>
<td>1</td>
</tr>
<tr>
<td>DH 307, Ethics and Jurisprudence</td>
<td>2</td>
</tr>
<tr>
<td>DH 310, Community Dental Hygiene</td>
<td>3</td>
</tr>
<tr>
<td>DH 316, Pain Management</td>
<td>2</td>
</tr>
<tr>
<td>DH 322, Clinical Dental Hygiene III</td>
<td>3</td>
</tr>
<tr>
<td>DH 324, Clinical Dental Hygiene IV</td>
<td>4</td>
</tr>
<tr>
<td>DH 409, Introduction to Research</td>
<td>1</td>
</tr>
<tr>
<td>for the Health Professions</td>
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<tr>
<td>HS 301, Pharmacology</td>
<td>1</td>
</tr>
<tr>
<td>HS 315, Head and Neck Anatomy</td>
<td>2</td>
</tr>
</tbody>
</table>

**Special Requirements**

Students are required to purchase uniforms and instruments needed during clinical learning experiences. Students also are required to purchase professional liability insurance and personal health insurance on an annual basis. In addition, students are required to provide their own transportation to and from the health care agencies used for clinical experiences.

Information related to special requirements is available to students in the office of the Dental Hygiene Department, Wichita State University, Wichita, Kansas 67260-0144.

**Lower-Division Courses**

**101. Preclinical Dental Hygiene.** (5). 3R; 7L. Fall semester only. A presentation of the basic philosophy of dentistry and dental hygiene. Considers measures that can be employed to prevent oral disease and promote dental health. Gives laboratory instruction in instrumentation for removal of deposits from the teeth. Prerequisite: program consent.

**104. Clinical Radiology.** (4). 3R; 3L. Presents the theory and practice of exposing, processing, and mounting X-ray films. Uses laboratory periods to gain proficiency in X-ray techniques. Stresses care of the equipment. Prerequisite: program consent.

**201. Dental Hygiene Concepts I.** (3). Spring semester only. Prepares dental hygiene students to assess, plan, implement, and evaluate the clinical care of patients. Emphasizes oral health promotion, dental hygiene diagnosis, patient motivation, and procedures for controlling plaque. Provides the tools to enable students to analyze individual patient needs and design appropriate professional and home care regimens. Prerequisite: departmental consent.

**202. Clinical Dental Hygiene I.** (3). 12L. Spring semester only. Emphasizes providing patient care in a clinical setting and nutritional counseling. Stresses basic instrumentation techniques as well as the prevention of dental disease. Develops patient evaluation and treatment planning skills. Prerequisite: program consent.

**206. General and Oral Pathology.** (3). Spring semester only. Surveys general pathology of tissues and organs of human anatomy. Discussions on dental pathology of the teeth, dental pulp, and oral tissues. Considers the signs, symptoms, and manifestations of oral lesions through lectures and visual aids. Prerequisite: program consent.

**281. Cooperative Education Field Study.** (1-8). Provides the 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 and approved by appropriate faculty sponsors and cooperative education coordinators. Prerequisite:
s, completion of the freshman year and satisfactory academic standing prior to the first job assignment. May be repeated for credit.

290. Oral Anatomy. (1) 1R; 5L. Studies tooth morphology, arrangement, function, and characteristics. Emphasizes the role of tooth morphology as it influences the practice of dental hygiene. Prerequisite: departmental consent.

295. Oral Histology and Embryology. (2) Studies the developmental and microscopic anatomy of the oral cavity including hard and soft tissues. Prerequisite: departmental consent.

Upper-Division Courses

301. Dental Materials. (2) 1R; 2L. Fundamental instruction in practical laboratory phases of modern technique and the manipulation of materials and equipment used in dental practice and expanded auxiliary practice. Prerequisite: program consent.

302. Clinical Dental Hygiene II. (2). Continued development of proficiency of clinical techniques emphasizing advanced periodontal instrumentation techniques. Class meets during Summer Session. Prerequisite: program consent.

303. Dental Hygiene Concepts II. (2). Fall semester only. Seminar discussion of current and advanced clinical concepts as well as other topics related to the treatment of the medically compromised patient. Prerequisites: DH 201 and program consent.

304. Dental Hygiene Concepts III. (2). Spring semester only. Discussion of dental specialties and explanation of the rationale for treatment prescribed by the dentist. Prerequisite: program consent.

307. Ethics and Jurisprudence. (2). Spring semester only. Surveys laws governing the practice of dentistry and dental hygiene; types of professional work for which students may qualify; the economics and ethics of the profession. Prerequisite: program consent.

310. Community Dental Hygiene. (3). Covers dental public health and community dental hygiene, focusing on education and prevention. Covers the professional philosophy and foundations of dental health education in a community health context, as well as in-depth study of certain aspects of dental public health such as fluoridation, epidemiology, and program development. Students develop dental health education materials and give presentations in the community.

314. Introduction to Periodontics. (2). Spring semester only. Lecture and visual aid presentation of the etiology and classification of periodontal disease. Studies the treatment of the periodontally involved patient emphasizing appropriate treatment planning for specific periodontal conditions. Prerequisite: program consent.

315. Advanced Periodontics. (1). A continuation of DH 314. Discusses supplemental diagnostic methods of assessment of periodontal diseases; treatment of unusual periodontal diseases including HIV periodontitis; adjunctive periodontal therapies including antibiotics and antimicrobial agents; implant maintenance and surgical therapies. Emphasizes the evaluation of periodontal case studies resulting in comprehensive treatment planning. Prerequisite: DH 314.

316. Pain Management. (2) 1R; 2L. Fall semester only. Enhances the dental hygiene student's knowledge of the mechanisms of pain, the control of dental pain through the administration of topical anesthetics, infiltration, and block anesthesia; and use of nitrous oxide. Emphasizes a thorough understanding of the pharmacology of dental drugs and their interaction with the client's current conditions and medications. Prerequisites: HS 301 and 315.

323. Clinical Dental Hygiene III. (3). 12L. Spring semester only. Final semester of clinical dental hygiene. Students utilize information and skills acquired in previous courses and continue to develop proficiency and increase their level of competency in all objectives from DH 202, 302, and 323. Prerequisite: program consent.

324. Clinical Dental Hygiene IV. (4). 16L. Spring semester only. Final semester of clinical dental hygiene. Students utilize information and skills acquired in previous courses and continue to demonstrate proficiency and increase their level of competency in all objectives from DH 202, 302, and 323. Prerequisite: program consent.

348. Clinical Skills Update. (1-3). Provides clinical remediation to graduate dental hygienists who wish to re-enter and enhance clinical skills. Students develop a self-study plan which will enrich their knowledge and skill above that offered in the dental hygiene core curriculum. Emphasizes identification of clinical skill level, development of remediation schedule, and self-evaluation skills. Student negotiates with dental hygiene program as to the parameters of techniques expected to reach student's goals. Graded Cr/NC. Prerequisite: must be a graduate of an accredited dental hygiene program.

350. Pain Management. (2). Updates the practicing dental hygienist in the didactic and clinical administration of infiltration and block anesthesia and the use of nitrous oxide. Emphasizes the mechanisms of pain, a thorough understanding of the pharmacology of dental drugs, and their interactions with the client's current conditions and medications, and clinical experience in the administration of infiltration and block anesthesia. Prerequisite: must be licensed dental hygienist and graduate of an accredited dental hygiene program.

405. Concepts and Principles of Dental Hygiene Administration. (3). Examination and seminar discussion of the following topics: administrative theory, principles and concepts of organizations, history of management thought, planning and effecting innovation, business administration and finance, operations, motivation, leadership, conflict, and communication. Prerequisite: program consent.

409. Introduction to Research for the Health Professions. (1). An introduction to the scope, format, and use of research in the health professions. Develops the ability to be a critical consumer of professional literature and the initiator of research projects. Prerequisite: program consent.

420. Educational Methodology in Dental Hygiene. (3). Seminar dealing with the implementation of teaching and learning theory and its application in the formation of a course of instruction. Students gain experience in teaching undergraduate students in laboratory/clinical settings. Prerequisite: program consent.

425. Advanced Periodontics. (3). An in-depth study of advanced periodontal, diagnostic, and treatment modalities with application to the clinical setting utilizing evidence-based patient specific protocols. Expands student's ability in assessment, diagnostic, and treatment planning skills. Prerequisite: DH 314 and 315 or equivalent.

430. Curriculum Development in Dental Hygiene Education. (3). A continuation of DH 420. Focuses on the development of an educational curriculum for a dental hygiene program. Additional opportunities are available for instruction in the clinical/labatory setting. Prerequisite: program consent.

452. Community Dental Health Management. (3). Focuses on the role of dental hygiene in managing oral health care. Emphasizes community and dental public health settings and population groups underserved by the current private practice. Prerequisite: DH 310 or equivalent.

455. Personnel Management in Dental Hygiene. (3). Analysis of personnel management and completion of a personnel simulation including job analysis, recruitment, interviewing, testing, job evaluation, wage determination, training, employee evaluation, and career development. Prerequisite: program consent.

462. Field Internship. (3). The research proposal or community dental health project developed in DH 465 is implemented. Student collects data concerning a special problem in community dental health or clinical dental hygiene. Includes the student and identification of research problems, review of related literature, development of research hypotheses, and research methodology. Prerequisite: DH 462.

468. Issues in Dental Hygiene. (3). Analysis of various professional issues in clinical or com
munity dental hygiene focusing on issues ranging from concerns within the local practice setting to national policy issues. Examines theories and applications uniquely suited to the dental health delivery system.

Health Professions

Lower-Division Course

101. An Introduction to the University. (3). Assists students in acquiring the academic and life skills essential to becoming a successful college student. Provides information, resources, and support to promote opportunities for success. Introduces and utilizes resources within the University and the community. Recommended for all degree-bound students entering WSU for the first time.

Health Science

The Department of Health Science offers a variety of applied clinical courses in anatomy, physiology, pharmacology, and nutrition which are applicable to several programs within the college at the undergraduate and graduate levels. In addition, courses serving the Master of Public Health, the Basic Emergency Medical Care Training Program, and course offerings for Mobile Intensive Care Technicians are offered through the department.

Lower-Division Courses

150. Workshop in Health Sciences. (1-10).

201. Orientation to Health Professions. (2). An examination of the health team concept, the role and relationship of the various providers of health care, and the criteria for the selection of a health career. Emphasizes the health team concept.

231G. Current Issues in Food and Nutrition. (3). Survey course; examines the various controversies, fads, and misconceptions surrounding nutrition and health; the cultural and historical aspects of food in America; and the political aspects of food and farm policy. Includes basic nutrition principles needed to fully understand the issues discussed.

Upper-Division Courses

301. Clinical Pharmacology. (3). Surveys therapeutic terms, drug actions, dosage, toxicology, and application of drugs in the clinical setting. Prerequisites: Biol. 223 or equivalent and Chem. 103 or 111Q or equivalent or instructor's consent.

315. Head and Neck Anatomy. (2). An indepth study of the landmarks, muscles, nerves, vascular supply, etc., of the head and neck region. Prerequisites: Biol. 223 and enrollment in Dental Hygiene Program.

331Q. Principles of Dietetics and Nutrition. (3). A study of human dietary and nutritional needs in the clinical setting. Covers composition and classification of foods, vitamins, and their function; food and public health laws; and nutrition under special conditions. Gives a detailed application of dietary and nutritional knowledge applied to various clinical conditions.

351. Health Care Team Concepts. (1-6). A seminar and practicum course which provides opportunity for health professionals to share experiences as members of the health care team. Departments select the number of credit hours needed for students within their program. Prerequisite: instructor's consent.

388. Clinical Anatomy. (3). Fall semester. Further the understanding of the health professional in a comprehensive and/or specific area of human anatomy. Emphasizes human anatomy of the thorax, abdomen, pelvis, head, and neck. Prerequisites: Biol. 223 or equivalent, instructor's consent, and enrollment in one of the professional programs.

389. Clinical Anatomy. (2). Spring semester. A continuation of HS 388 emphasizing human anatomy of the genital-urinary, neuromusculo-skeletal system, and neuro-anatomy. Prerequisites: HS 388, instructor's consent, and enrollment in one of the professional programs.

390. Clinical Physiology. (3). Further the understanding of the health professional in a comprehensive and/or specific area of human physiology and the clinical application of this knowledge in patient management. Departments select the number of credit hours needed for their program and offer them under this course number with a designated subsection. Prerequisites: instructor's consent and enrollment in one of the professional programs.

400. Introduction to Pathophysiology. (3). Cross-listed as Nurs. 400. For professional upper-division students enrolled in the College of Health Professions. Focuses on the essential mechanisms of disordered function which produce clinical disorders. Discusses common diseases, but as examples of the basic processes covered, not as a part of an exhaustive inventory. Preserves the health professional with accessible, usable, and practical information they can broadly and quickly apply in their clinical or laboratory experience, or use as a basic pathophysiology course before taking the more specific professionally related pathophysiology courses. Prerequisite: instructor's consent or enrollment in upper-division CHP professional courses.

411. Special Projects. (1-6). Supervised intensive study of special topics and problems related to health professions. By arrangement. Prerequisite: program chairperson's consent.

450. Workshop in Health Sciences. (1-4).

Courses for Graduate/Undergraduate Credit

510. Clinical Departmental Management. (3). Presents concepts and methods of clinical department management through lectures, discussion, group interaction and individual problem solving and situational analysis projects. Provides information pertinent to management majors, department directors, shift supervisors and staff personnel who need an understanding of departmental management of clinical revenue generating departments. Prerequisites: senior standing or greater in health professions and Mgmt. 360 or instructor's consent.

511. Neuroanatomy and Neurophysiology. (3). 2R, 2L. Study of the structure, physiology and functions of the central and peripheral nervous systems. Prerequisite: HS 310 or CDS 214.

531. Applied Principles of Nutritional Support and Therapy. (3). A study of the principles of nutritional support and diet therapy. Includes the dietary concerns of a variety of clinical disorders including gastrointestinal disorders, diabetes mellitus, cancer, burns, obesity and weight loss, kidney and cardiovascular disease, parental and enteral nutrition and surgical conditions. Discusses nutritional assessment, data interpretation, case plan development, record keeping and client communications. Prerequisite: HS 331 or instructor's consent.

575. Special Topics or Selected Topics. (1-4). Lecture/discussion; focuses on a discrete area content relevant to the health disciplines. In-depth study of particular topic or concept, including didactic and current research findings in the etiological, biochemical, and physiological aspects of the topic. Open to nonmajors. Repeatable up to six credit hours with program consent.

583. Anatomy of the Body Cavities. (3). The gross anatomy of the human body cavities presented in a four-week summer term using a regional approach. Teams of eight students dissect the thoracic, abdominal, and pelvic cavities on human cadavers, emphasizing cardiovascular, respiratory, gastrointestinal, and urogenital systems. Prerequisite: Biol. 203 or 223.

700. Gross Anatomy. (6). 3R, 9L. For students in the physical therapy program. Study of the structures of the human body including embryology; emphasizes integration of embryological and anatomical information with human functional abilities. Prerequisites: four semesters of biological sciences or program consent.

720. Neurosciences. (3). 3R, 2L. Integration of embryology, anatomical structure, physiology and functions of the central and peripheral nervous system with human functional abilities. Prerequisites: HS 700 or program consent.

750. Workshop in Health Related Professions. (1-4). An examination of relevant topics directly and/or indirectly related to the delivery of health care service.

Courses for Graduate Students Only

800A. Seminar in Health Science. (1). Recent developments and issues affecting the financing, organization and management of health care resources in both the public and private sector of our nation's medical care system. Prerequisite: HS 701 or program consent.

800B. Seminar in Health Education. (1). Covers current trends and directions in allied health education in both patient care and aca-
802. Introduction to Public Health. (3). Introduction to the organization and activities of the public health system, its roles and problems. Introduction to administrative problem-solving as a structured process. Prerequisite: instructor’s consent.

804. Principles of Statistics in the Health Sciences. (3). An introductory graduate level course concerning the concepts of statistical reasoning, statistical principles, and their role as the scientific basis for clinical research, and public health research and practice. Prerequisite or corequisite: HS 802.

808. Principles of Epidemiology. (3). An introductory graduate level course concerning epidemiologic principles and how these form the scientific basis for public health. Prerequisite or corequisite: HS 802.

810. Practicum/Project. (3). Enhances and complements the academic experience of students pursuing the Master of Health Science degree. Provides an opportunity to link the student’s academic studies with actual practice in direct observation and supervised participation of the administrative/educational process in a selected health care organization. Students carry out their assigned tasks under the guidance and direction of a faculty member of the College of Health Professions. The student also may be under the direction of a field instructor/preceptor from the host agency.

812. Health Care Policy and Administration. (3). An in-depth look at policy and management issues in the health system from a public health perspective. Topics include health policy, trends in the health care system, and administrative issues. Topics are critiqued with regard to public health goals, the interests of consumers and providers, and ethics. Prerequisite or corequisite: HS 802.

814. Social and Behavioral Aspects of Public Health. (3). Examines the characteristics, beliefs, and behaviors of individuals and groups involved in the process of health care. Draws on concepts and principles of the social, behavioral, and clinical sciences, especially dynamics that define the interactions of providers and consumers of health care. Explores why people react to perceived symptoms the way they do, the reasons providers respond as they do to patients 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. Prerequisite or corequisite: HS 802.

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. Prerequisite or corequisite: HS 802.

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 public health research, and those who make policy affecting the delivery arrangements. Prerequisites: HS 804 and 808.

820. Advanced Research Methods in Community and Clinical Settings. (3). Study research methods for use in any of the health science disciplines. Topics include power and sample size, randomized control trials, and integrated qualitative-quantitative techniques. Prerequisites: HS 814 and 818.

821. Community Health Assessment and Development. (3). Focuses on three areas. (1) Value issues related to community health assessment and development, including value choices, clarification of choices, trade-offs, and public judgement. Explores the value and belief systems of libertarians, classic liberals, and communarians. (2) Development tools both conceptual and technical, needed to conduct community health assessments. Includes measurement of health status and development of health care information systems. (3) Policy issues related to community development including allocation of health resources by comparing benefits of competing interventions. Addresses major allocation issues, such as who allocates resources, using the Health Resource Allocation Strategy.

822. Advanced Research Methods. (3). Advanced topics in health services research: advanced descriptive analysis, advanced multivariate analysis, modeling, causal interpretations, issues in evaluation, proposal writing, special issues in research in health are settings, and problems encountered on research projects. Prerequisite: HS 818.

823. Social Epidemiology. (3). Examines the patterns and explanations for diversity in mortality and morbidity in populations, focusing on social factors including social class, race, ethnicity, culture, stress, and social relationships, both formal and informal. Explores current thinking about the explanations for mortality and morbidity patterns.

824. Advanced Epidemiological Methods. (3). Additional statistical techniques and their application in the analysis of public health data are presented with special emphasis on the analysis of cross-sectional, retrospective, longitudinal, and case-control data. Prerequisites: HS 804 and 805.

825. Health Care Marketing. (3). An examination of marketing principles as applied in the health care sector. Recognize, discuss, and apply marketing principles to health care environments. Prerequisite: Mkt. 800.

826. Health Policy. (3). Examines the forces shaping key aspects of health care policy. Analyzes the political, economic, social, clinical, and scientific factors which result in given policy decisions. Particular attention is paid to the pivotal role that health services research plays in the process, including its centrality to the link between policy and the management of public health problems.


830. Issues in Health Services. (3). An in-depth look at current issues facing health professionals. Topics, presented in lecture and student presentations which are discussed in small groups, include health reform, access to care, other system issues, and organizational trends and strategies. Topics are critiqued with regard to public and private goals, consumer and provider interests, and ethics.

832. Quality Assurance of Health Care. (3). Covers issues of quality assurance in health care provision, including definition and measurement of quality.

834. Financing Health Care Services. (3). Provides an examination of the principles of financial analysis and management used in health care institutions, which are useful to non-financial personnel. It emphasizes understanding and application of general financial concepts to the health setting and includes consideration of financial organization, sources of operating revenues, budgeting, and cost allocation methods.

836. Maternal and Child Health in a Social Context. (3). Examines the effects of the social context on maternal and child health. Emphasizes the family and the social values and beliefs that affect it since it is the most immediate context of mothers and children. Includes other contextual influences such as race and ethnicity, social class, work, and community resources and support. Develops and assesses models of influence. Discusses the effect of public policies on maternal and child health.

838. Applied Data Analysis. (3). Guides students through the data analysis and data management aspects of population-based research and evaluation studies. Includes managing data on personal computers using SPSS for Windows95, preparing data for computerization, cleaning and assessing the quality of data, developing and assessing measures, choosing appropriate statistical methods, reading and analyzing computer printouts, and reporting the results in research papers or technical reports. Requires use of statistical methods learned in introductory biostatistics as well as regression analysis. Students learn to use SPSS for Windows95. Uses population-based data, both surveys and administrative. Analytic portion of course is organized around specific research questions and the statistical tools appropriate for answering them.

840. Practicum. (3 or 6). Academic studies are linked 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.

843. Health Program Planning. (3). An introductory course for students interested in
developing health programs. Provides a conceptual framework of program planning and development. Develop and practice skills in the planning and evaluation of health programs by developing a program plan for a health program in a community of interest.

844. Health Promotion Methods and Materials. (3). Develop competency in selecting and evaluating appropriate methods and materials for effective health promotion programs. Includes foundations of health communication, adult education theories and practice, community health education, and health promotion materials development and evaluation. Integrates theory into practice by developing the methods and materials for a health promotion program.

858. Long-Term Care Systems. (3). Analyzes long-term care in the U.S. as a response to chronic illness and disability, emphasizing the diversity of long-term care systems addressing the needs of persons of all ages. Addresses system and organizational concerns affecting costs, outcomes, and quality. Explicitly applies a trajectory model of chronic illness and disability, conceptualizing long-term care systems in their response to chronically ill and disabled individuals. Students are encouraged to have taken HS 812 or to take it concurrently.

875. Special Topics. (3). New or special topics presented based on sufficient demand. Prerequisite: Instructor's consent.

876. Directed Study. (1-3). Individual study of the various aspects and problems within public health. Repeatable for credit with departmental consent. Prerequisite: Instructor's consent.

885. Thesis. (1-3). Repeatable to a maximum of six hours. Prerequisite: consent of thesis advisor.

Health Services Organization and Policy

The program in health services organization and policy seeks to develop professionally competent individuals to serve in various capacities in the health care industry. The program offers a broad base of knowledge in areas needed for management, clinical professional patient care services, and research applications in health service organizations. Graduates of the program may pursue a variety of career objectives in the health services industry. The degree may build upon the foundation of an associate degree or other appropriate credentials in an allied health area or provide the base for an advanced degree in a clinical professional area such as physical therapy or medicine. The degree may be combined with a minor in business for those who wish to pursue management careers in the health industry or with course work in other areas to pursue a variety of careers in the health industry. The degree also may serve as a base for those who wish to further their education in graduate programs such as public health, gerontology, or other related areas.

A minor in health services organization and policy is available to any student not pursuing a degree in health services organization and policy. A minor consists of 15 hours of health services organization and policy courses. The required courses are HSOP 320, Overview of Health Services Delivery; HSOP 325, Introduction to the Science of Health and Disease; HSOP 328, Health Care Organization; and six hours of elective HSOP courses.

Admission

In order to be admitted to the health services organization and policy program, students must fulfill the following requirements:

1. Be enrolled in or admitted to Wichita State University.
2. Have completed Eng. 101 and 102, Comm. 111, and Math. 111, each with a C or better.
3. Have an overall grade point average of 2.000 or above in all course work.
4. Submit a completed application to the director of the program and be accepted into the program. Application forms may be obtained from the College of Health Professions advising office in 402 Ahlberg Hall.

Progression

Students in the health services organization and policy major are required to maintain a cumulative grade point average of 2.250 in course work required in the major, including those courses chosen for elective credit toward the major, with no individual course grade lower than a C. Students failing to meet this requirement will have one semester to correct their GPA deficiency. Failure to do so will result in dismissal from the program.

Degree Requirements

In addition to the WSU general education and basic skills requirements, the student is required to complete 33 credit hours for the major. The following courses will constitute 24 hours toward the major. Nine additional hours are to be selected from electives listed, or, if not selected from courses listed, electives must be approved by the department chair or the HSOP program coordinator. The student may choose between HSOP 460, HSOP Practicum, and HSOP 461, Special Project.

In addition, the student may choose to extend the practicum to 6 or 9 hours. However, the additional hours beyond the 3 required may not count toward the 9 hours of elective credit.

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>HSOP 320, Overview of Health Services Delivery</td>
<td>3</td>
</tr>
<tr>
<td>HSOP 325, Introduction to the Science of Health and Disease</td>
<td>3</td>
</tr>
<tr>
<td>HSOP 328, Health Care Organization</td>
<td>3</td>
</tr>
<tr>
<td>HSOP 333, Organizational Behavior and Leadership in Health Service Organizations</td>
<td>3</td>
</tr>
<tr>
<td>HSOP 343, Program Planning/Development in Health Services</td>
<td>3</td>
</tr>
<tr>
<td>HSOP 442, Financing Health Care Services</td>
<td>3</td>
</tr>
<tr>
<td>HSOP 454, Health Politics</td>
<td>3</td>
</tr>
<tr>
<td>HSOP 460, HSOP Practicum and HSOP 461, Special Project</td>
<td>3-9</td>
</tr>
</tbody>
</table>

Approved electives to complete the 33 hours required by the major:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>HSOP 433, Introduction to Research and Evaluation Methods for Health Care Professionals</td>
<td>3</td>
</tr>
<tr>
<td>HSOP 638, Concepts of Quality</td>
<td>3</td>
</tr>
<tr>
<td>HSOP 641, Health Care for Special Populations</td>
<td>3</td>
</tr>
<tr>
<td>HSOP 644, Health Economics</td>
<td>3</td>
</tr>
<tr>
<td>HSOP 647, Health Care Operations Analysis</td>
<td>3</td>
</tr>
<tr>
<td>HSOP 652, Strategic Management in Health Service Organizations</td>
<td>3</td>
</tr>
</tbody>
</table>

Students with a clinical emphasis may, with the approval of the department chair or the HSOP program coordinator, choose from the following electives:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>HS 301, Clinical Pharmacology</td>
<td>3</td>
</tr>
<tr>
<td>HS 331Q, Principles of Dietetics and Nutrition</td>
<td>3</td>
</tr>
<tr>
<td>HS 400, Introduction to Pathophysiology</td>
<td>3</td>
</tr>
<tr>
<td>HS 531, Applied Principles of Nutritional Support and Therapy</td>
<td>3</td>
</tr>
<tr>
<td>HS 575C, Special Cases in Pathophysiology</td>
<td>3</td>
</tr>
<tr>
<td>Phil. 327, Philosophy of Health Care</td>
<td>3</td>
</tr>
</tbody>
</table>

Other courses may be considered on a case-by-case basis with approval by the department chair or the HSOP program coordinator.

Students with a business emphasis have the following options in addition to the specific electives listed above:
Course work from the Barton School of Business which allows a student to pursue depth in a functional area, such as a special interest consistent with the HSOP degree program and their business minor or major, may be chosen with the consent of the department chair or the HSOP program coordinator. In some cases there may be courses available from other colleges in the University which would serve to enhance the student's special area of interest, such as ethics or gerontology, which may be chosen with the approval of the department chair or the HSOP program coordinator.

Lower-Division Course

281. Cooperative Education Field Study. (1-8) Provides the student with a field placement which includes 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 and approved by appropriate faculty sponsors and cooperative education coordinators. Prerequisites: completion of the freshman year and satisfactory academic standing prior to the first job assignment. May be repeated for credit.

Upper-Division Courses

320. Overview of Health Services Delivery. (3). Examines the nature of the health care delivery system: the structure and facilities through which care is provided, the personnel who administer the care, the consumers served by the system, the fiscal mechanisms which enable the system to operate, and the public sector factors which shape and regulate the outcomes. This course attends to the underlying influence of money, power, and politics which often links personal illness experience with patterned responses of the health care industry.

325. Dynamics of Community Health. (3). Introductory course to study the multiple dimensions of public health. Presents the foundations and structure used to resolve medical and environmental health problems. Focuses on the health of populations and sub-populations, emphasizing prevention. Prerequisites: Biol. 106/Q or equivalent.

328. Health Care Organization. (3). Covers issues of management, organization, and operations of health care organizations, stressing the unique character of health care delivery organizations. Emphasizes types of health organizations, leadership and managerial roles, organizational structure and dynamics, interactions with organizational environments, and evaluation and planning. Prerequisites: HSOP 320 and 325 or concurrent enrollment.

333. Organizational Behavior and Leadership in Health Service Organizations. (3). Introduces the concepts of leadership in health care organizations with a focus on the differing leader roles with peers, subordinates, superiors, patients, professional and trade organizations and volunteers. It applies general concepts of leadership from behavioral sciences and management to the special case of health care organizations, emphasizing leadership styles and roles, intraorganizational communications, interpersonal and group relationships, motivation, and implementation of organizational change. Prerequisite or corequisite: HSOP 328.

343. Program Planning/Development in Health Services Organizations. (3). Presents the range of planning methods currently used in health service organizations including strategic and operational planning as well as program and project development. Provides a conceptual framework for planning to allow application of skills which will facilitate student understanding of the importance of planning in order to manage direction in decision making in an environment characterized by a high degree or risk and uncertainty. Students use these methods to plan a program or project. Prerequisites: HSOP 325 or concurrent enrollment, and HSOP 328.

433. Introduction to Research and Evaluation Methods for Health Care Professionals. (3). Deals with methods, statistical procedures, and design that health professionals must understand in order to intelligently analyze research and evaluation in the health care field and to conduct evaluations of health care programs and interventions. Covers issues of analysis for planning and evaluation of health programs, including needs assessment, determining objectives, issues in program implementation and monitoring, and evaluation of program outcomes. Prerequisites: HSOP 320 and 325 or concurrent enrollment.

442. Financing Health Care Services. (3). Examines the principles of financial analysis and management used in health care institutions which are most useful to non-financial personnel. Emphasizes understanding and application of general financial concepts to the health setting: considers financial organization, sources of operating revenues, budgeting, and cost accounting methods. Uses examples for various types of health service organizations. Prerequisite: HSOP 325 or concurrent enrollment and HSOP 328.

454. Health Politics. (3). Shows how the U.S. Government makes decisions in the health field, describes the political forces shaping governmental policy in health, and analyzes the arguments for and against an increased governmental role in health. Prerequisite: HSOP 320 and 325 or concurrent enrollment.

458. 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 services addressing the needs of persons of all ages. Addresses systems 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 HSOP 320, 325, or 328.

460. Health Services Organization and Policy Practicum. (3-9). Provides an opportunity for field experience in the health care system. Students may select, with the consent of an advisor, an internship in an appropriate health service organization. Requires a written report of the experience. Prerequisites: senior standing and program consent.

461. Special Project. (3). Supervised study of special topics and problems related to health care organizations or policy. By arrangement. Prerequisites: senior standing and program consent.


490. Independent Study in Health Services Organization and Policy. (1-6). Supervised intensive study of special topics and problems relating to health care delivery. Repeatable up to six hours. Prerequisite: program consent.

Courses for Graduate/Undergraduate Credit

638. Concepts of Quality. (3). For health care personnel. Covers issues of quality assurance and improvement in health care provision, including definition and measurement of quality. Prerequisite: HSOP 320 or departmental consent.

641. Health Care for Special Populations. (3). Examines the characteristics and needs of many at-risk groups in America today, including homeless people, refugees and immigrants, people with AIDS, alcohol and substance abusers, high-risk mothers and infants, victims of family or other violence, the chronically or mentally ill, and people with mental retardation and developmental disabilities. Demonstrates the populations at risk, their access to health care and the quality of health care services they receive are reviewed as are the cost, financing, and regulation of such care. Consideration is given to relevant research initiatives and program interventions. Prerequisites: HSOP 320 and 325 or concurrent enrollment or departmental consent.

644. Health Economics. (3). An application of economic theories, principles and concepts to the U.S. medical care system. Includes the determinants of supply and demand, the role of need, the impact of provider generated demand, the role of health insurance and government in the delivery of medical care. Prerequisite: Econ. 202 or departmental consent.

647. Health Care Operations Analysis. (3). An examination of methods for measuring the operational efficiency and effectiveness of health care delivery systems. Includes methods for analyzing current operations and approaches to plan better manpower, facility, technology, financial planning and management control systems in a health setting. Prerequisites: HSOP 320 and 328 or Mgmt. 360 or departmental consent.

652. Strategic Management in Health Service Organizations. (3). Provides an analysis of business problems seen in health care organizations from a strategic management perspective. Uses a series of case studies which require that the student integrate the functional areas of business, including management, marketing, finance and operations. Discusses all types and sizes of health service organizations in the context of the current environment for these
Medical Technology
The medical technologist's role in the health care team is to accurately and precisely perform laboratory procedures in order to aid in the prevention, diagnosis, and treatment of diseases. Most medical technologists are employed in medical laboratories in settings such as hospitals, clinics, reference labs, and physicians' offices. The medical technologist also has the skills necessary for employment in related areas such as laboratory and pharmaceutical sales; quality assurance in industries such as food, beverage, chemicals, milling, and plastics; office laboratory consulting; toxicology; research; and veterinary medicine.

Bachelor of Science in Medical Technology
The Bachelor of Science program in medical technology, requiring a total of 129 hours, includes 72 hours of premedical technology curriculum in the basic sciences, social sciences, humanities, and communication. The University-based program includes structured lecture and laboratory experiences in the University's student clinical laboratory as well as in the program's affiliated laboratories: Wesley Medical Center, Via-Christi-St. Francis Campus, Via-Christi-St. Joseph Campus, the Wichita Clinic, and the Veterans Administration Medical Center, Wichita; Hutchinson Hospital Corporation, Hutchinson; Hertlerz Clinic and Columbia-Hastead, Hastead, Central Kansas Medical Center, Great Bend; Asbury-Salina Regional Medical Center, Salina; and St. Catherine Hospital, Garden City; and Stormont-Vail Hospital, Colmery-O'Neil Veterans Hospital, and St. Francis Medical Center, Topeka. Upon successful completion of the program, students are granted the Bachelor of Science in medical technology and are eligible to sit for the national certification examinations.

Preprofessional Curriculum

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Skills</td>
<td>12</td>
</tr>
<tr>
<td>Engl. 101 and 102, College English I and II</td>
<td>6</td>
</tr>
<tr>
<td>Comm. 111, Public Speaking</td>
<td>3</td>
</tr>
<tr>
<td>Math. 111, College Algebra</td>
<td>3</td>
</tr>
<tr>
<td>Fine Arts and Humanities</td>
<td>12</td>
</tr>
<tr>
<td>One Introductory course from a Fine Arts discipline</td>
<td>3</td>
</tr>
<tr>
<td>One Introductory course from each of two Humanities disciplines</td>
<td>6</td>
</tr>
<tr>
<td>A Further Study course from same discipline as Introductory course or Issues and Perspectives course in Fine Arts or Humanities</td>
<td>3</td>
</tr>
<tr>
<td>Social and Behavioral Sciences</td>
<td>9</td>
</tr>
<tr>
<td>Psy. 111Q, General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>One Introductory course from a different Social and Behavioral Sciences discipline</td>
<td>3</td>
</tr>
<tr>
<td>A Further Study course from same discipline as Introductory course or Issues and Perspectives course in Social and Behavioral Sciences</td>
<td>3</td>
</tr>
<tr>
<td>Natural Sciences and Mathematics</td>
<td>48</td>
</tr>
<tr>
<td>Biol. 203Q, Organismal Biology</td>
<td>5</td>
</tr>
<tr>
<td>Biol. 204, Cellular Biology</td>
<td>5</td>
</tr>
<tr>
<td>Biol. 223, Anatomy/Physiology</td>
<td>5</td>
</tr>
<tr>
<td>Biol. 330, General Microbiology</td>
<td>5</td>
</tr>
<tr>
<td>Chem. 111Q, General Chemistry*</td>
<td>5</td>
</tr>
<tr>
<td>Chem. 112Q, General and Inorganic Chemistry*</td>
<td>5</td>
</tr>
<tr>
<td>Course coverage in organic chemistry (Chem. 531, five hours, or Chem. 533 and 534, five hours)</td>
<td>5</td>
</tr>
<tr>
<td>Chem. 561, Introduction to Biochemistry, or HS 400, Introduction to Pathophysiology</td>
<td>3</td>
</tr>
<tr>
<td>Med. T. 400, Medical Immunology</td>
<td>3</td>
</tr>
<tr>
<td>Electives</td>
<td>7</td>
</tr>
</tbody>
</table>

*May substitute Chem. 122Q-124Q, General and Analytical Chemistry (10 hours), if prerequisites are met. Check with advisor.

Admission to Professional Curriculum
Applications should be submitted to the medical technology program by May 1 for fall entry, October 1 for spring entry, and March 1 for summer entry.

To qualify as a candidate for admission to the professional phase, the student must:
1. Be admitted to Wichita State University
2. Be in the process, or have completed, the preprofessional requirements
3. Submit application to department
4. Submit three letters of recommendation
5. Have a minimum GPA of 2.500
6. Complete professional goal statement

Acceptance into the professional phase of the program is determined by the Medical Technology Admissions Committee.

Professional Curriculum

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Med. T. 400, Clinical Laboratory Management/Education</td>
<td>3</td>
</tr>
<tr>
<td>Med. T. 466, Foundations of Laboratory Practice</td>
<td>2</td>
</tr>
<tr>
<td>Med. T. 450 and 451, Clinical Chemistry I and Iab</td>
<td>5</td>
</tr>
<tr>
<td>Med. T. 452, Analysis of Body Fluids</td>
<td>3</td>
</tr>
<tr>
<td>Med. T. 456 and 457, Clinical Chemistry II and Iab</td>
<td>4</td>
</tr>
<tr>
<td>Med. T. 459, Applied Clinical Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>Med. T. 460 and 461, Hematology I and Iab</td>
<td>4</td>
</tr>
<tr>
<td>Med. T. 466 and 467, Hematology II and Iab</td>
<td>4</td>
</tr>
<tr>
<td>Med. T. 469, Applied Hematology</td>
<td>3</td>
</tr>
<tr>
<td>Med. T. 470 and 471, Immunohematology I and Iab</td>
<td>4</td>
</tr>
<tr>
<td>Med. T. 476 and 477, Immunohematology II and Iab</td>
<td>3</td>
</tr>
<tr>
<td>Med. T. 479, Applied Immunohematology</td>
<td>3</td>
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<tr>
<td>Med. T. 486, Clinical Laboratory Instrumentation</td>
<td>3</td>
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<tr>
<td>Med. T. 489, Applied Clinical Techniques</td>
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<tr>
<td>Med. T. 490 and 491, Clinical Microbiology I and Iab</td>
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<td>Med. T. 494, Special Topics in Clinical Microbiology</td>
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<tr>
<td>Med. T. 496 and 497, Clinical Microbiology II and Iab</td>
<td>3</td>
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<tr>
<td>Med. T. 498, Applied Clinical Microbiology</td>
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Other Requirements
Students are required to provide their own transportation to the clinical sites. Students are required to purchase professional liability insurance in the amount of not less than $100,000/$300,000. Students must provide evidence of a completed physical examination, including a tuberculin skin test, rubella, rubeola liter, and hepatitis immunization prior to their clinical assignments in the affiliate laboratories.

Lower-Division Courses

160Q, Introduction to the Clinical Laboratory Sciences. (2). 1R, 2L. A study of clinical laboratory disciplines, including hematology, immunohematology, chemistry, microbiology, cytology, and histology, through an examination of laboratory testing in each discipline with consideration of the role of the clinical laboratory in the health care system. Suitable for majors who wish to explore career selection and non-majors who come in contact with clinical laboratories either as a health professional or as a consumer.

281. Cooperative Education. (1-3). Provides a field placement that 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 and approved by appropriate faculty sponsors and the cooperative education coordinators. Repeatable for credit. Prerequisites: basic requirements for admission include successful completion of the freshman year and satisfactory academic standing prior to the first job assignment.

310. Clinical Laboratory Services. (1). An overview of the services and information provided by the clinical laboratory. Emphasizes basic procedures and interpretation of data. Prerequisite: Limited to Physician Assistant students in professional program.

Upper-Division Courses

400. Clinical Laboratory Management/Education. (3). A study of the principles and methodologies of laboratory management and supervision and teaching techniques applicable to the clinical laboratory sciences. Prerequisite: Program consent.

405Q. Medical Immunology. (3). An introduction to the study of immunological concepts as they apply to the study, prevention, and causation of the disease process. Prerequisite: Biol. 223.

406. Foundations of Laboratory Practices. (2). An introduction to clinical laboratory skills and instrumentation. Includes laboratory safety specimen collection and processing, medical terminology and use and care of the microscope. Prerequisite: Program consent.

411. Special Topics. (1-6). Supervised intensive study of special topics and problems related to health professions. Repeatable to a maximum of six hours. Prerequisite: Program director's consent.

411A. Special Topics in Clinical Chemistry. (1). Review of current quality control procedures, biological variables, interactions, and factors affecting test results. Prerequisite: BSMT or equivalent and MT/CLS certification.

411B. Special Topics in Hematology. (1). Reviews RBC, WBC, platelet morphology and cell differentiation, along with a summary of the laboratory features associated with various anemias and leukemias. Prerequisite: BSMT or equivalent and MT/CLS certification.

411C. Special Topics in Immunohematology. (1). Generalist training in immunohematology. Through lecture, discussion and demonstration, technologist explores transfusion products and diagnostic services in a modern blood bank. Prerequisite: BSMT or equivalent and MT/CLS certification.

411D. Special Topics in Microbiology I. (1). Reviews gram stain and media reactions, the new classification of organisms, rapid identification methods, and issues of antimicrobial resistance. Gram positive cocci, gram negative cocci, gram positive bacilli, enterobacteriaceae, nonfermenters, anerobes, mycobacteria, and miscellaneous organisms. Prerequisite: BSMT or equivalent and MT/CLS certification.

411E. Special Topics in Microbiology II. (1). Reviews virology, mycology, parasitology, and morphological characteristics used in the identification of organisms. Focuses on laboratory methods and test interpretation used in the clinical laboratory. Prerequisite: BSMT or equivalent and MT/CLS certification.

411F. Special Topics in Urinalysis/Hematology. (1). Urinalysis segment reviews current quality assurance requirements, urine sediment, and correlation of physical, chemical, microscopic tests with clinical significance. In hematology, reviews coagulation abnormalities using a case study approach. Emphasizes the laboratory tests used in diagnosing various coagulopathies. Prerequisite: BSMT or equivalent and MT/CLS certification.

450. Clinical Chemistry I. (3). The study of basic clinical chemistry encompassing the study and application of clinical chemistry calculations, quality control, and the study of colorimetric, spectrophotometric, and ultraviolet principles and techniques for the analysis of serum and other body fluids. Prerequisites: Chem. 531 and Biol. 223.

451. Clinical Chemistry I Laboratory. (1). 5L. Application of the theory of the procedures and techniques used for colorimetric, spectrophotometric, and ultraviolet analysis of serum plasma and other body fluids for clinically significant substances.

452. Analysis of Body Fluids. (3). 2R; 3L. Includes the study of renal physiology, routine urinalysis, and renal function tests. Also encompasses the principles and techniques involved in the analysis of cerebrospinal fluid, feces, gastric fluid, synovial fluid, amniotic fluid, ascitic fluid, duodenal fluid, salivary fluids, and seminal fluid.

456. Clinical Chemistry II. (3). Includes advanced instrumentation principles and techniques, acid-base balance, advanced enzymology and toxicology. Emphasizes special testing procedures used in the hematology laboratory and the relationship between the body and procedural development and evaluation. Prerequisite: Med. T. 450, 451, or program approval.

457. Clinical Chemistry II Laboratory. (1). 3L. A laboratory course encompassing the application of the principles of technique appropriate to the evaluation of methodology, acid-base balance, advanced enzyme quantification, endocrinology, and toxicology. Prerequisite: Med. T. 456; concurrent enrollment, or program approval.

459. Applied Clinical Chemistry. (3). Application of clinical chemistry procedures and techniques in the analysis of body fluids in a clinical laboratory setting. Prerequisites: Med. T. 457 and program consent. Offered Cr/NCr only.

460. Hematology I. (3). Emphasizes the theory underlying basic procedures performed in the hematology laboratory and the relationship between these procedures and the diagnosis of disease. Prerequisites: Biol. 223 and program consent.

461. Hematology I Laboratory. (1). 3L. Emphasizes performance of the basic procedures used in the hematology laboratory, including complete blood counts, normal and abnormal differentials, and miscellaneous hematology tests. Prerequisite: Med. T. 460 or concurrent enrollment and/or program consent.

466. Hematology II. (3). Emphasizes the clinical significance of laboratory data and its correlation with pathologic conditions. Includes in-depth discussion of anemias and leukemias. Prerequisites: Med. T. 460, 461, and program consent.

467. Hematology II Laboratory. (1). 3L. Emphasizes special testing procedures used in the hematology laboratory for diagnosis of anemias and various white cell disorders such as leukemia. Prerequisites: Med. T. 466 or concurrent enrollment and program consent.

469. Applied Hematology. (3). Application of the theory and technical skills of hematology in a clinical laboratory. Prerequisites: Med. T. 462, 467, and program consent. Offered Cr/NCr only.

470. Immunohematology I. (3). An introduction to blood banking theory pertinent to assurance of quality transfusion practices in a donor service, including selection, collection, processing, and component therapy, and to a transfusion service, including application of immunology and genetics to blood group systems, compatibility testing, and clinical correlations related to transfusion reactions and to the prediction, diagnosis, and prevention of hemolytic disease of the newborn. Prerequisite: Med. T. 405Q or equivalent or Instructor's consent.

471. Immunohematology I Laboratory. (1). 3L. A laboratory course in techniques relevant to performance of a blood banking technologist in a donor or transfusion service. Methodology includes blood typing, antibody screening, single antibody identification, compatibility testing, prenatal testing, neonatal testing, Rh immune globulin, and quality assurance of immunohematology laboratory procedures. Prerequisites: Med. T. 405Q or equivalent and Med. T. 470 or concurrent enrollment or instructor's consent.

476. Immunohematology II. (2). A problem-solving, theoretical course in blood banking, covering HLA, disputed paternity, forensic testing, antibody identification techniques, and resolution of serological incompatibilities encountered in blood types, compatibility testing, hemotherapy, hemolytic disease of the newborn, Rh immune globulin tests, and hemolytic anemia workups. Prerequisite: Med. T. 470 or instructor's consent.

477. Immunohematology II Laboratory. (1). 3L. A laboratory course in techniques relevant to resolution of medical-legal cases, antibody identification, and problems encountered in blood typing, compatibility testing, hemotherapy, hemolytic disease of the newborn, Rh immune globulin, and hemolytic anemia workups. Prerequisite: Med. T. 476 or concurrent enrollment or instructor's consent.

479. Applied Immunohematology. (3). Application of the theory and technical skill of immunohematology in a clinical laboratory with experiences in prenatal testing, antibody
Mobile Intensive Care Technicians

A program for the training of mobile intensive care technicians (MICT) or paramedics is offered at Wichita State University in Ahlberg Hall. The basic program consists of 47 credit hours in 18 months. Students may be awarded an Associate of Applied Science with an emphasis in emergency medical training by Cowley County Community College by combining the 47 credit hours from the successful completion of the MICT training program with 9 hours of course work from Cowley County Community College (offered in Wichita) and 18 additional general education hours from WSU or another accredited institution. Successful completion of this program does not guarantee certification but does allow one to challenge the certification examination given by the State of Kansas. In addition, students who have completed the MICT training and taken the required general education courses to receive the AAS degree may apply to the bachelor's degree program in health sciences.

Lower-Division Courses

205. Introduction to Advanced Pre-Hospital Care. (4). An overview of the role of pre-hospital personnel, medical ethics, medical legal issues, EMS systems, terminology, procedures, medical terminology, patient assessment, history taking, body systems review, and fluid and electrolytes. Prerequisites: instructor and department approval.

207. Electrophysiology. (3). Presents the techniques of assessment and management of the cardiac patient and associated disease processes common with the cardiac patient. Covers recognition of cardiac rhythms and management of different cardiac arrhythmias from the standpoint of emergency care. Prerequisites: instructor and department approval.

210. Pre-Hospital Pharmacotherapeutics. (3). Presents the information needed for administering the medications used in pre-hospital situations, the methods of administration, conversion of various measures and information on drug regulating agencies. Prerequisites: instructor and department approval.

215. Adult and Pediatric Medical Emergencies. (8). Presents the pathophysiology and management of disorders of the respiratory system, endocrine system, central nervous system, and gastrointestinal system. Includes information on communicable diseases, exposure emergencies, geriatric emergencies, pediatric emergencies, obstetric emergencies, and psychiatric emergencies. Prerequisites: instructor and department approval.

217. Traumatology. (7). Discusses the kinematics of injury and management of the adult and pediatric trauma patient, including airway and fluid management, pre-hospital treatment of various injury states including joint and penetrating trauma, burns, and triage. Prerequisites: instructor and department approval.

220. Clinical Internship. (9). Receive in-hospital training with physicians, nurses, and technicians in their area of expertise including the ER, SICU, PICU, MICU, OR, IV Team, LDR, and other areas where skills learned can be
applied to pre-hospital care. Prerequisites: instructor and department approval.

224. Field Internship. (11) Pre-hospital training with local emergency medical services which are supervised by certified MICT's. Prerequisites: instructor and department approval.

226. Field Correlation. (1) Review all material and skills gained during the program and apply this information to the field experience. Prerequisites: instructor and department approval.

Physical Therapist Assistant

Associate of Science

Physical therapist assistants work under the supervision of a physical therapist in the delivery of physical therapy services. Their duties include assisting the physical therapist in implementing treatment programs according to the plan of care, educating patients in exercises and activities of daily living, conducting treatments, using special equipment, administering modalities and other treatment procedures, and documenting the patient’s responses.

The Commission on Accreditation of the American Physical Therapy Association accredits physical therapist assistant programs. Wichita State received full accreditation in May 1996.

Upon completion of the professional program, students receive the Associate of Science (AS) in physical therapist assistant and are eligible to take the state board examination for registration in the state of Kansas.

Admission Requirements

Admission to the program requires that the student:

1. Have a minimum cumulative grade point average of 2.500 and a 2.500 GPA in math and science prerequisite courses.

2. Show evidence of completing the following:

- **Mathematics and Science**
  - 4-5 credits
  - Anatomy
  - Physics
  - Human Anatomy and Physiology
  - College Algebra

- **Social Science**
  - 3 credits
  - Introduction to Sociology
  - General Psychology

- **Humanities**
  - 3 credits
  - Ethics or Introduction to Philosophy
  - Speech

- **Basic Skills**
  - 3 credits
  - College English

- **Admission Requirements**
  - **Instructors:**
    - Physical Therapist Assistant
    - Instructor and department

- **Prerequisites:**
  - **College English:**
    - Basic English

- **Professional Curriculum**

  The professional curriculum takes 14 months. All physical therapy procedure and clinical courses must be taken sequentially. Professional course work taught in the classroom will be offered during evening hours. Clinical course work is a full-time activity (eight hours per day for two-, four-, or six-week periods, 8 a.m.-5 p.m.)

- **Course**
  - Phys 328, Kinesiology and Biomechanics
  - HIS 400, Introduction to Pathophysiology
  - PTA 200, PTA Procedures I
  - PTA 205, PTA Procedures II
  - PTA 210, PTA Procedures III
  - PTA 215, PTA Procedures IV
  - PTA 220, PTA Procedures V
  - PTA 225, PTA Clinical I
  - PTA 230, PTA Clinical II
  - PTA 235, PTA Clinical III
  - PTA 240, Independent Study

- **Contact the Department of Physical Therapy for complete course descriptions.**

Special Requirements

Students will be required to purchase lab jackets 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 clinical rotations.

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 are 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.

Lower-Division Courses

200. PTA Procedures I. (4). Features theory and skill development for basic physical therapy skills. Emphasizes range of motion, aseptic technique, posture, bed positioning, massage, goniometric measurements, manual muscle testing, bandaging, wheelchairs, architectural barriers, ambulation, safety, and vital signs. Includes psychosocial aspects of patient care and self-directed and directed study in physical therapy. All skills are reinforced and practiced in supervised scheduled laboratories. Discusses basic instruction in SOAP format note writing. Prerequisite: admission to PTA program.

205. PTA Procedures II. (4). Emphasizes the theory and practical application of physical agents utilized in physical therapy. Instruction in modalities such as therapeutic heat and cold, phototherapy, hydrotherapy, electrotherapy, pneumotherapy, and traction. Includes an introduction to therapeutic exercise and gait. Reinforces all skills through combined application during supervised laboratory sessions. Prerequisite: PTA 200.

210. PTA Procedures III. (4). Emphasizes therapeutic exercise, orthotics, prosthetics, and rehabilitation programs for various patient populations including amputees, spinal cord and spinal disorders, stroke, pediatric, neurological, orthopedic, and cardipulmonary conditions. Prerequisite: PTA 200.

215. PTA Procedures IV. (4). Emphasizes therapeutic exercise and physical therapy treatment programs for various patient populations, including arthritis, burn, cancer, sports medicine, cardiopulmonary, geriatric, industrial medicine, and AIDS. Summarizes psychosocial aspects of patient care as related to clinical conditions. Prerequisite: PTA 210.

220. PTA Procedures V. (3). Emphasizes professional aspects of the physical therapist assistant, including topics such as reimbursement, legislation, continuing education, code of ethics, professional relations, research, employment, and current developments in the field. Broadens students' understanding of professional responsibility and motivates them toward personal involvement, commitment, and continuing competence in the physical therapy profession. Includes a special topics section covering TMJ dysfunction, basic pharmacology, and orthopedic radiography. Prerequisite: PTA 210.

225. PTA Clinical I. (2). Involves observation of various types of patients in local clinical settings, with some practicum of skills learned in Procedures I. Enthusiastic communication among the clinical coordinator, student, and academic coordinator. Gives opportunities to observe and work with a variety of patients in a supervised capacity and to begin developing competence as a medical team member. Prerequisite: admission to PTA program.

230. PTA Clinical II. (4). A practicum of skills learned in Procedures I to III. Opportunities to be placed in a diversity of health care settings within and outside the city and to practice the
Admission Requirements

Admission to the program requires that the student:
1. Have a bachelor's degree from an accredited four-year institution acceptable to the Graduate School;
2. Have a cumulative grade point average of 3.000 in each of the following: in all prerequisite courses; in the last 60 hours of undergraduate course work; and in all required math and science courses;
3. Show evidence of completing the following:
   - Biology—two semesters of introductory biology (which would lead to a biology major) with a laboratory
   - Anatomy and Physiology—8-10 semester hours
   - Exercise Physiology—3 hours
   - College Chemistry—two semesters with laboratory
   - College Physics—two semesters with laboratory
   - English Composition—two semesters
   - Computers—one semester computer applications course or the equivalent
   - Speech—one semester
   - Mathematics—college trigonometry or equivalent
   - Statistics—one semester
   - Social Sciences—psychology, sociology, plus an additional 12 hours in social science
   - Humanities—ethics, plus an additional 12 hours in humanities
   - Twenty hours of documented observational experience.

No more than six hours in any area

To be reviewed for admission, applicants should do the following:
1. Request in writing an application packet from the physical therapy program with a fee of $20.
2. Submit the designated Application for Admission and supporting transcripts to the Graduate School.
3. Submit the designated Physical Therapy Application, along with all requested materials to the physical therapy program as requested on the application form.

Applications will be reviewed after February 1 for the next fall admission. Applicants will be notified of their admission status by the Graduate School. Applications will be reviewed only when all materials have been submitted. Once an applicant has been admitted, he or she will be asked to submit a $100 nonrefundable tuition deposit to guarantee a space for the fall. Once the student enrolls, this money will be used toward payment of tuition and fees.

Degree Requirements

The student must maintain a 3.000 grade point average and a C or better in each of the following courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
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<tbody>
<tr>
<td><strong>Fall</strong></td>
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<tr>
<td>HS 700, Gross Anatomy</td>
<td>6</td>
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<tr>
<td>PT 705, Clinical Medicine I</td>
<td>4</td>
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<tr>
<td>PT 701, Research Methods and Statistics II</td>
<td>2</td>
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<tr>
<td>PT 710, Principles of Physical Therapy I</td>
<td>5</td>
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<td>17</td>
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<td><strong>Spring</strong></td>
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<tr>
<td>HS 720, Neurosciences</td>
<td>3</td>
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<tr>
<td>PT 715, Seminar I</td>
<td>1</td>
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<tr>
<td>PT 726, Clinical Medicine II</td>
<td>2</td>
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<td>PT 730, Principles of Physical Therapy II</td>
<td>5</td>
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<tr>
<td>PT 735, Physical Therapy Theory Procedures I</td>
<td>4</td>
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<tr>
<td>PT 841, Independent Study</td>
<td>1-3</td>
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<td>16-18</td>
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<tr>
<td><strong>Summer</strong></td>
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<tr>
<td>PT 800, Clinical Education I</td>
<td>6</td>
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<td><strong>Second Year</strong></td>
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<td>Fall</td>
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<tr>
<td>PT 810, Principles of Physical Therapy II</td>
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<tr>
<td>Management I</td>
<td>3</td>
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<tr>
<td>PT 825, Seminar II</td>
<td>1</td>
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<tr>
<td>PT 826, Clinical Medicine III</td>
<td>2</td>
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<tr>
<td>PT 835, Physical Therapy Theory and Procedures II</td>
<td>4</td>
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<tr>
<td>PT 841, Independent Study</td>
<td>1-3</td>
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<td>13-15</td>
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<td><strong>Spring</strong></td>
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<tr>
<td>PT 820, Physical Therapy</td>
<td>2</td>
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<tr>
<td>Management II</td>
<td>2</td>
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<tr>
<td>PT 830, Principles of Physical Therapy IV</td>
<td>3</td>
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<tr>
<td>PT 840, Independent Study</td>
<td>1</td>
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<tr>
<td>PT 845, Seminar III</td>
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<tr>
<td>PT 850, Clinical Education II</td>
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<tr>
<td>PT 841, Independent Study</td>
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<td>12-15</td>
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<td><strong>Summer</strong></td>
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<td>PT 860, Clinical Education III</td>
<td>6</td>
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<td>PT 870, Clinical Education IV</td>
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<tr>
<td><strong>Special Requirements</strong></td>
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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 clinical rotations.

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 physical therapy program Student Handbook for more details on special program policies and procedures.

Upper-Division Course

481. Co-op Education. (1-3). A field placement which integrates course work with a professional experience designed to complement and enhance the student academic program. Programs must be formulated in consultation with and approved by faculty sponsors and cooperative education coordinators. Students follow one of two patterns: parallel enrolling concurrently in a minimum of 6 hours of course work, or alternating; working full time one semester in a field study and returning to full school enrollment the following semester; such students need not be concurrently enrolled in other courses. Prerequisite: successful completion of freshman year and satisfactory academic standing prior to the first job assignment. May be repeated for credit.

Courses for Graduate/Undergraduate Credit

701. Research Methods and Statistics. (2). Discussion and application of statistics, critiquing scientific literature and the development of a research proposal and major literature review. Prerequisite: program consent.


710. Principles of Physical Therapy I. (5). 3R; 6L. Development of ability to differentiate causes of musculoskeletal problems and development of basic treatment programs using scientific rationale for treatment selection. Prerequisite: program consent.

725. Seminar I. (1). 1R; 1L. Discussion of information from readings and other sources regarding the profession, settings for health care delivery, professionalism, and psychosocial aspects of health care. Prerequisite: program consent.

726. Clinical Medicine II. (2). 2R. Survey of medical conditions seen by physical therapists emphasizing causes, effects and treatments. Emphasizes medical model. Coordinated by program. Prerequisite: PT 705.

730. Principles of Physical Therapy II. (5) 3R; 6L. Continuation of PT 710, adding concepts and techniques to develop treatment programs for patients with neuromuscular and musculoskeletal problems. Prerequisite: program consent.


790. Selected Topics in Physical Therapy. (1-4). Intensive study of current issues, technology, research, and application of selected topic. Repeatable up to 6 credits. Prerequisite: program consent.

799. Experimental Courses. (1-4). One-time course offerings. Prerequisite: program consent.

Courses for Graduate Credit Only

800. Clinical Education I. (6) 40P. Introduction to physical therapy care in varied settings requiring communication and interpersonal relationship skills; application of basic physical therapy procedures; beginning professional socialization; beginning development of a generalist in physical therapy. Prerequisite: program consent.

810. Principles of Physical Therapy III. (4). 2R; 6L. Correlation of previous course materials, and the use of scientific rationale to develop physical therapy evaluations and treatments for industrial and geriatric clients and for patients with specific orthopedic medical diagnoses. Also discusses prevention of musculoskeletal problems and utilization of appliances. Prerequisite: program consent.

815. Physical Therapy Management I. (3). 3R. Study of payment systems, legal aspects of physical therapy, assurance of quality physical therapy care. Includes peer review, documentation, legal and ethical aspects, fiscal consideration, marketing, communication with the public, private sector and government officials. Prerequisite: program consent.

820. Physical Therapy Management II. (2). 2R. Study of management systems including assessment, planning, organization, control and evaluation methods. Includes personnel management, fiscal considerations, electronic device utilization and management styles. Prerequisite: program consent.

825. Seminar II. (1). 1R; 1L. Discussion of teaching and learning theories as they apply to physical therapy education of patients, students, health professionals, and community. Includes methods of evaluating instruction, content, strategies, and learners. Prerequisite: program consent.

826. Clinical Medicine III. (2). 2R. Continuation of PT 726. Prerequisite: PT 726.

830. Principles of Physical Therapy IV. (3). 2R; 2L. Integration of evaluations, treatment modalities and program planning previously presented in the curriculum to develop and to evaluate specialty services in physical therapy including prosthetics for amputees, arthritis, diabetes, burns and obstetrics-gynecology; developmental investigation of clinical protocols to screen for scoliosis, well babies, and safe work environment. Prerequisite: program consent.

835. Physical Therapy Theory and Procedures II. (4) 3R; 2L. Development of physical therapy evaluations and treatment programs for cardiopulmonary, neurologic and other long-term rehabilitation patients. Assistive devices, home evaluations and problems with architectural barriers are incorporated into discharge planning. Prerequisite: program consent.

836. Physical Therapy in Pediatrics. (2). Provides supplemental skills for the entry-level physical therapist in the area of pediatrics. Didactic work and clinical exposure is incorporated in the class. Offered as an elective in the physical therapy program. Prerequisite: PT 730.

837. Special Populations. (3). Expands upon basic evaluation and treatment skills of geriatrics, women's health, and industrial medicine regarding physical therapy practice. Also includes psychosocial elements, medical complications, health promotion and prevention information as it pertains to the three special populations listed. Prerequisite: PT 735.

841. Independent Study. (1-3). Individual study with objectives developed in collaboration with a departmental faculty member. Repeatable for credit with program consent. Prerequisite: program consent.

845. Seminar III. (1). 1R; 1L. Discussion of information from readings and other sources regarding employment, psychosocial and international aspects of physical therapy. Prerequisite: program consent.

850. Clinical Education II. (6) 40P. First in a series of three 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. Prerequisite: program consent.

860. Clinical Education III. (6) 40P. Second in a series of three 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. Prerequisite: program consent.

870. Clinical Education IV. (6) 40P. Third in a series of three 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. Prerequisite: program consent.

890. Thesis. (1-6). Repeatable to a maximum of six hours. Prerequisites: enrollment in graduate studies and consent of thesis advisor. In the series of three clinical courses, students experience 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 expectations of performance with each clinical course which is guided by the evaluation process.

Physician Assistant

Physician assistants (PAs) are professional members of the health care team who, working with physicians, provide diagnostic and therapeutic patient care in vir-
Preprofessional Curriculum

The physician assistant program maintains the philosophy that persons with varied backgrounds can be successful physician assistant students. Prior health care experience is not required, but is preferred. Interested parties should contact the physician assistant program for detailed application information, including time frame for applying, references, and selection criteria. Admission to the program is highly competitive. Requirements must be complied with in complete and accurate detail. The physician assistant program curriculum builds on a foundation of liberal arts and sciences.

Course work taken longer than 10 years ago will be subject to program review. Students may be required to repeat certain prerequisite courses.

1. Applicants with any academic degree should consult a member of the program's faculty to determine if the preprofessional requirements for admission to the program and for the Bachelor of Science degree have been met.

2. For any person holding a baccalaureate degree the following are required:
   a. The GEC requirements
   b. Biol. 203Q (5 hours), Biol. 220 (4 hours), Biol. 223 (5 hours)
   c. Math. 111, College Algebra or equivalent (3 hours)

3. All others complete the following:
   a. The GEC requirements
   b. Biol. 203Q (5 hours), Biol. 220 (4 hours), Biol. 223 (5 hours)
   c. Chem. 111Q (5 hours), Chem. 112Q (5 hours)

Additional academic requirements:
1. An overall college grade point average of 3.0/4.0 (3.25 for out-of-state)
2. A grade point average of 3.0/4.0 for prerequisite course work (3.25 for out-of-state)
3. A grade of C or better in all Division C courses

Course Hrs.
Basic Skills
Engl. 101 and 102, College English I and II.......................... 6
Comm. 111, Public Speaking........................................ 3
Math. 111, College Algebra.......................... 3
Fine Arts and Humanities
One Introductory course from a Fine Arts discipline.................. 3
One Introductory course from each of two Humanities disciplines.... 6
A Further Study course from same discipline as Introductory course or Issues and Perspectives course in Fine Arts or Humanities... 3
Social and Behavioral Sciences
9
One Introductory course from each of two different Social and Behavioral Sciences disciplines......................... 6
A Further Study course from same discipline as Introductory course or Issues and Perspectives course in Social and Behavioral Sciences.... 3
Natural Sciences and Mathematics
24
Introductory courses:
Chem. 111Q, General Chemistry......... 5
Biol. 203Q, Organismal Biology........ 5
Further Study course:
Chem. 112Q, General and Inorganic Chemistry.................. 5
Additional requirements:
Biol. 220, Microbiology.................. 4
Biol. 223, Human Anatomy and Physiology.................. 5

General Information for Admission to Professional Curriculum

Students entering the physician assistant professional course of study are required to purchase malpractice insurance in an amount set by the State of Kansas. Students are also required to purchase all the diagnostic equipment needed for use during the two-year course of study as well as the required articles of dress. Applications for the physician assistant program are obtained from the department for a $20 fee. Applicants should be aware that admission to the University is not admission to the physician assistant program.

Selection for admission to the physician assistant professional curriculum is based on many factors. Each applicant is evaluated in terms of academic performance, health care experience, references, communication skills, and so forth.

Professional Curriculum

The physician assistant program curriculum consists of both classroom and clinical courses. Courses are taught by physicians, physician assistants, and other health care professionals in locations throughout the state.

Once admitted, students must take the following courses to meet the physician assistant professional requirements. Professional courses are available only to students in the program.

Course Hrs.
Junior Year
Fall
HS 388, Clinical Anatomy I.......................... 3
HS 390, Clinical Physiology.......................... 3
PA 300, Medical History and Physical Examination.................. 4
PA 302, Patient Counseling.......................... 2
PA 315, Physician Assistant Professional Issues.................. 1
PA 320, Assessment and Management of the EENT Systems........... 3
PA 325, Preventive Medicine and Community Health.................. 2
PA 420, Applied Clinical Pharmacology I.......................... 3
Med. T. 310, Clinical Laboratory.......................... 1
Total.................................................. 22

Spring
HS 389, Clinical Anatomy II.......................... 2
PA 316, Assessment and Management of the Integument.................. 1
PA 317, Assessment and Management of the Endocrine System........... 1
PA 323, Assessment and Management of the Cardiopulmonary Systems........ 4
PA 330, Assessment and Management of Gastrointestinal System........ 3
PA 333, Assessment and Management of Obstetrics and Gynecology........ 3
PA 335, Assessment and Management of the Renal and Genito-Urinary Systems... 3
PA 336, Applied Clinical Practice.......................... 2
PA 421, Applied Clinical Pharmacology II.......................... 3
Total.................................................. 22
### Graduation Requirements
Students who meet the course requirements specified in the physician assistant curriculum will receive a Bachelor of Science degree with a physician assistant major.

### Other Requirements
Students must purchase laboratory jackets, identification patches, and name tags, and are required to provide their own transportation to the clinical site. Students must provide evidence of a complete physical examination including a tuberculin skin test, MMR immunization, Hepatitis B or titer, and health insurance prior to clinical assignment.

### Lower-Division Course

A field placement which integrates course work 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 and approved by appropriate faculty sponsors and cooperative education coordinators. Students enrolled in Co-op 281 may follow one of two scheduling patterns: parallel, enrolling concurrently in a minimum of six hours of course work in addition to their Co-op assignment, or alternating working full time one semester in a field study and returning to full school enrollment the following semester; such students need not be concurrently enrolled in any other course. Prerequisites: completion of the freshman year and satisfactory academic standing prior to the first job assignment. May be repeated for credit.

### Upper-Division Courses

#### 300. Medical History and Physical Examination. (4). 3R; 2L. Provides the theoretical and practical knowledge that can be utilized to obtain an appropriate medical history and/or conduct a proper physical examination (complete/perinent). Also focuses on the identification of normal and abnormal physical findings. Practice of methods and techniques learned take place in a facility-proctored laboratory setting. Prerequisite: admission to PA professional program.

#### 302. Patient Counseling (2). Considers the theories and techniques of patient counseling; emphasizes effective communication, basic counseling techniques, and basic strategies for therapeutic intervention. Deals with the philosophies of counseling for a wide range of cognitive and behavioral problems common to the primary care setting. Prerequisite: admission to PA professional program.

#### 315. PA Professional Issues. (1). Introduces the junior PA students to a wide variety of issues, such as legal, ethical, and professional issues regarding PA practice. Prerequisite: admission to PA professional program.

#### 316. Assessment and Management of the Integument. (1). Deals with the skin as a major organ. Includes wound healing, burn management, tissue reactivity, cutaneous manifestations of systemic disease, specific diagnostic techniques with regard to assessment of dermatologic disorders and introduction to dermatologic disorders and introduction to dermatologic clinic through case presentations. Prerequisite: admission to PA professional program.

#### 317. Assessment and Management of the Endocrine System. (1). Deals with the endocrine system. Includes diseases of the pituitary gland and hypothalamus; diseases of the thyroid, parathyroid, and adrenal glands; diabet es mellitus diagnostic procedures; specific diagnostic procedures with regard to assessment and management of endocrinologic diseases and the endocrine emergency; and the treatment of endocrine diseases. Prerequisite: admission to PA professional program.

#### 320. Assessment and Management of Ophthalmic and Otorhinolaryngological Problems. (3). Deals with the pathophysiology of the eye, ear, nose, and throat. Emphasizes ophthalmology, diagnosis, and treatment of ophthalmic and otorhinolaryngological conditions (ENT) problems. Includes tumors of the eye, ear, nose, and throat; ophthalmologic diseases; systemic ophthalmic manifestations; and systemic disease. Prerequisite: admission to PA professional program.

#### 323. Assessment and Management of the Cardiovascular System. (4). Deals with the cardiovascular systems. Includes the assessment and management of acute and chronic cardiovascular diseases, peripheral vascular disease, and emergencies. Appropriate evaluation and management of cardiovascular disease; includes pulmonary function tests and other health-related measures as applicable to the primary care setting. Prerequisite: admission to PA professional program.

#### 325. Preventive Medicine and Community Health. (2). Addresses topics in preventive medicine and community health including risk factors for the major causes of death and disability, behavioral techniques used in making health behavior change, health risk appraisal, immunization, health screening, and disease and accident prevention. Introduces community agencies with roles in disease prevention, health education, and health promotion. Prerequisite: admission to PA professional program.

#### 330. Assessment and Management of the Gastro-Intestinal System. (3). A theory, laboratory, and clinical course; deals with the gastrointestinal (GI) system. Includes assessment of diseases of organs in the GI tract, special problems of the newborn, relationships of the autonomic nervous system to GI symptomatology, roentgenology of the GI tract, GI manifestations of psychic disturbances, and demonstration of special diagnostic instruments. Prerequisite: admission to PA professional curriculum.

#### 333. Assessment and Management of Obstetrics and Gynecology. (3). Deals with obstetrics and gynecology. Includes the menstrual cycle, pregnancy, gynecologic diseases, techniques of normal delivery, obstetrical emergencies, family planning, and infertility. Prerequisite: admission to PA professional program.

#### 335. Assessment and Management of the Renal and Genito-Urinary Systems. (3). Deals with the kidneys, ureters, bladder, and prostate. Includes electrolyte and fluid balances, hypertension, tumors of the genito-urinary system (GU) infectious diseases, trauma, calculi, and special diagnostic procedures. Examine common renal diseases emphasizing assessment, management, treatment, and epidemiology. Prerequisite: admission to PA professional program.

#### 336. Applied Clinical Practice. (2). Further prepares students for the senior clinical learning experience and practice beyond. Emphasizes the application of the skills and techniques learned in the previous courses, and involves written and oral problem-solving, and critical-thinking skills in both inpatient and outpatient settings. Includes small group discussion, computer-assisted instruction, problem-oriented patient cases, patient interaction, and individual patient presentations. Prerequisite: admission to PA professional program.

#### 337. Assessment and Management of the Neuro-Musculo-Skeletal Systems. (3). Emphasizes the recognition, evaluation, and management of neuro-musculo-skeletal diseases and injuries in primary care, emergency, and inpatient settings. Prerequisite: admission to PA professional program.

#### 375. Clinical Skills I. (3) 1R; 4L. Graded S/U. A combined theory, laboratory, and clinical experience; students apply their knowledge to the care of patients. Includes the physical examination emphasizing applied anatomy and physiology, the physical examination with examples of normalities and abnormalities; medical terminology, evalu-
tion of patients; patient rapport and professional conduct. Emphasizes lecture, simulation, and clinical application. Prerequisite: admission to PA professional program.

410. Clinical Rotation I. (3). A six-week clinical experience; students participate in the care of patients in a variety of medical settings and specialties. Emphasizes orientation to medical practice-setting and obtaining and recording a complete and/or problem-oriented medical history. Students obtain and record complete and/or problem-oriented physical examination data, become familiar with common diagnostic procedures and are involved in the selection of therapeutic regimens. Students are, at the discretion of the preceptor, included in all aspects of health care services offered at the site. Graded S/U. Prerequisites: admission to PA professional program and faculty approval.

412. Clinical Rotation II. (3). See PA 410. Emphasizes obtaining and recording complete and/or problem-oriented physical examination data. Graded S/U.


418. Clinical Rotation IV. (3). See PA 410. Emphasizes the selection of appropriate therapeutic regimens and their indications, availability, reliability, and limitations. Graded S/U.

419. Clinical Rotation V. (3). See PA 410. Emphasizes the art of medicine and gaining the confidence of the patient and family. Graded S/U.

420. Applied Clinical Pharmacology I. (3). Introduces pharmacology and clinical application of specific categories of drugs. Presents mechanism of action, pharmacokinetics, indications, dosages, side effects, and monitoring parameters of selected drug categories. Facilitates clinical application of this knowledge through case studies. Includes patient specific dosage modification, drug selection, patient education, compliance, and economic issues. Prerequisite: admission to PA professional program.

421. Applied Clinical Pharmacology II. (3). A continuation of PA 420. Discusses clinical application of specific categories of drugs commonly encountered in acute care settings. Includes first-line versus second-line drugs, alternate drugs, drug interactions, and adjustment of drug dosages. Explores responsibility related to data collection, problem identification, and communication with the practitioner and pharmacist. Prerequisites: PA 420 and admission to PA professional program.


425. Clinical Rotation VII. (3). See PA 410. Emphasizes integrating the skills and knowledge obtained in previous rotations; as well as health promotion, disease prevention, and patient education. Graded S/U.

430. Clinical Conference I. (1; 1R; 2L). Major focus on synthesis of didactic and clinical education and training as it applies to advanced cardiac life support. Graded S/U. Prerequisite: student in PA professional program.

432. Clinical Conference II. (3). 1R; 3L. Spring semester only; for clinical physician assistant students. Primary focus on issues affecting the graduate physician assistant, which include legislative issues, professional associations and responsibilities, practice limitations, malpractice issues, etc. Includes review sessions for the National Board Examination utilizing lecture, demonstration, and computer-assisted instruction. Prerequisites: admission to PA professional program.

440. Clinical Preceptorship. (6). Eight-week course: culmination of the student’s clinical training. Students are placed with a primary care physician to enable them to function as members of the health-care team in a setting similar to that which would be encountered by the graduate physician assistant. Graded S/U.


School of Nursing

The School of Nursing offers the Bachelor of Science in Nursing and the Master of Science in Nursing. For more information about the master's degree, refer to the Wichita State University Graduate Bulletin.

Bachelor of Science in Nursing

The Bachelor of Science in Nursing program is designed to prepare students for the practice of professional nursing. The graduate is prepared for beginning positions in nursing in any health care delivery system and for further study at the master and doctoral levels and for advancement to nursing positions of increasing responsibility and leadership.

Students are admitted to the School of Nursing at the junior year after completing 58 hours of course work. Persons interested in the Bachelor of Science in Nursing may direct inquiries to: Nursing Counselor, School of Nursing, Wichita State University, Wichita, Kansas 67260-0041.

Preprofessional Curriculum

Students applying for admission to the School of Nursing must have completed the following courses. Students should consider taking 16 hours per semester or attending Summer Session.

Course          Hrs.  

Basic Skills    
Math. 111, 112 or 211 ...  3  
Engl. 101, College English I ...  3  
Engl. 102, College English II ...  3  
Comm. 111, Public Speaking ...  3

Humanities and Fine Arts  
Fine Arts .............................. 3  
Phil. 100G, The Meaning of Philosophy ..  3  
Course in humanities other than philosophy ..........  3  
Social and Behavioral Sciences  
Psyk. 111Q, General Psychology ...  3  
Psyk. 334Q, Developmental Psychology ...  3  
Soc. 111Q, Introduction to Sociology ...  3  
Natural Sciences and Mathematics  
Biol. 220Q, Introduction to Microbiology (applies as an Introductory course for the BSN degree only) ...  4  
Chem. 103Q/111Q, General Chemistry ...  5  
Other Prerequisites  
Biol. 223, Human Anatomy and Physiology .......................  5  
HS 301, Clinical Pharmacology ..................  3  
Nurs. 285, Introduction to Nursing Practice .............  2  
Nurs. 400, Introduction to Pathophysiology .............  3  
CS 105, Introduction to Microcomputers ....  3  
Statistics with approval .............................  3

Admission to School of Nursing

Students should request an application form from the School of Nursing prior to enrolling in their last semester of prerequisite courses. Application forms for fall semester admission are required by February 1; for spring semester admission, by September 1. To qualify as a candidate for admission to the School of Nursing, students must:

1. Be enrolled in, or admitted to, Wichita State University
2. Have completed, or have plans to complete, the prerequisite requirements
3. Have an overall grade point average of at least 2.500 in all courses completed and no grade lower than a C in any of the required courses
4. Submit an application including expected semester of enrollment.
5. Complete Nurse Entrance Test (NET) with a minimum composite percentage score of 60.

Professional Curriculum

The following courses in the School of Nursing are required for the Bachelor of Science in Nursing. A total of 124 hours of University credit is required for graduation.

Course                  Hrs.  

Semester 5  
Nurs. 300, Care Manager I ..................  3  
Nurs. 310, Primary Care .................  4  
Nurs. 320, Health Alterations I .......  3  
Nurs. 325, Research ....................  2  
Nurs. 345, Health Assessment ...........  4
Semester 6
Clinical Nutrition .......................................4
Nurs. 360, Secondary Care (8 weeks) .................4
Nurs. 370, Health Alterations II ...........................4
Nurs. 380, Maternal-Newborn Nursing (8 weeks) .....4

Semester 7
Nurs. 402, Care Manager II .............................3
Nurs. 410, Tertiary Care .....................................4
Nurs. 420, Mental Health (8 weeks) ...................4
Nurs. 430, Nursing of Children (8 weeks) .............4

Electives
Upper-division philosophy/ethics ....................3
Issues and Perspectives .................................3
General Education course ..............................3

RN to BSN Progression Plan
The RN to BSN plan offers advanced placement to registered nurses seeking a Bachelor of Science in Nursing degree. Twenty-five hours of retroactive credit or credit by exam in nursing courses can be applied to the degree. The RN to BSN curriculum follows the Kansas Nursing Articulation Plan.

Registered nurses must:
1. Submit verification of current license to practice as a registered nurse in Kansas
2. Submit official transcripts of college courses and records verifying completion of a nursing program.

Registered nurse students who have met admission requirements may obtain information from the School of Nursing regarding enrollment in the transition course, Nurs. 325, RN Bridge Course, and Advanced Placement by which they may validate 25 nursing credits at the upper-division level.

Course   Hrs.
Prerequisites and General Elective Courses
Basic Skills
Math. 111, 112 or 211 .......................................3
Engl. 101, College English I ............................3
Engl. 102, College English II ............................3
Comm. 111, Public Speaking ............................3

Humanities and Fine Arts
Fine Arts ..................................................3
Phil. 100G, The Meaning of Philosophy ............3
Course in humanities other than philosophy .........3
Social and Behavioral Sciences
Psy. 111Q, General Psychology .......................3
Psy. 334Q, Developmental Psychology ...............3
Soc. 111Q, Introduction to Sociology ...............3

Natural Sciences and Mathematics
Biol. 220Q, Introduction to Microbiology (applies as an introductory course for the BSN degree only) ....4
Chem. 103Q/111Q, General Chemistry ................5

Other Prerequisites
Biol. 223, Human Anatomy and Physiology ..........5
Statistics with approval ....................................3
General electives*.......................................13
Total 60

Upper-Division Requirements
Philosophy/Ethics .......................................3
Electives* ..................................................6
Total 9

* Three hours of general or upper-division electives must be an issue and Perspectives course to meet General Education requirements.

Professional Curriculum
HS 301, Clinical Pharmacology ............................3
Nurs. 325, Research .......................................2
Nurs. 334, RN Bridge Course .............................3
Nurs. 345, Health Assessment ............................4
Nurs. 456, Primary Prevention ............................2
Nurs. 461, Care Manager .................................4
Nurs. 495, Clinical Capstone Course-RN 3..............3
Nurs. 531, Nursing and Computer Technology ........3
Career enhancement electives .......................6
Total 27

Upper-division nursing credits awarded retroactively on the basis of associate degree in nursing or credit by exam.................25
Total 124

Other Requirements
Uniforms are required for all clinical laboratory experiences. Students are required to provide their own transportation to and from health care agencies used for these experiences. Students are required to purchase professional liability insurance in the amount of $1 million per single claim/$3 million aggregate per year. The insurance must be renewed annually. Students must provide evidence of personal health insurance and evidence of a completed physical examination prior to clinical laboratory experiences each academic year. Additional costs for instructional materials, testing, lab experiences, etc., may be required throughout the program. CPR certification is required. Information related to these requirements is available from the School of Nursing.

Lower-Division Course
285. Introduction to Nursing Practice. (2).
Introduces the discipline and scope of nursing as practiced in diverse settings. Examines dimensions of current and emerging roles of nursing within the context of the student’s self-awareness of personal and professional goals. Prerequisite: sophomore standing.

Upper-Division Courses
300. Care Manager I. (3). An introduction to the nursing role as it relates to legal, ethical, professional, and economic issues in the current health care system. Emphasizes interpersonal skills related to individual and group communication. Prerequisites: Nurs. 285 and concurrent enrollment in Semester 5 classes.

310. Primary Care. (4). 2T: 6P. Focuses on teaching health promotion concepts and providing preventive care to the individual, family, and community. Introduces the nursing process as a problem-solving tool. Uses the technology lab and various primary care settings for clinical learning. Prerequisites: Nurs. 285 and concurrent enrollment in Semester 5 classes.


325. Research in Nursing. (2). Presents an overview of the research process and its relationship with theory. Emphasizes identifying clinical problems, critiquing research findings, and applying those findings to practice. Prerequisite: Concurrent enrollment in Semester 5 classes.

334. RN Bridge Course. (3). Enhances the knowledge base of the RN-BSN student in leadership and management theory and application, issues in professional nursing, therapeutic communication, and nursing theory. Prerequisite: admission to WSU School of Nursing.

335. Transitions to Professional Nursing. (2). Introduces the licensed practical nurse (LPN) to the study of nursing as a practice discipline and professional nursing roles. Emphasizes the nursing process and the self-care concept of nursing and its use in professional practice, education, and scholarship. Prerequisites: current license as an LPN in Kansas and admission to the School of Nursing.


340. Health Assessment. (4). 3T; 3L. Emphasizes multiple methods of data collection relevant to the health status of individuals and families across the lifespan. Focuses on holistic assessment of individuals and families from diverse populations. Prerequisites: Nurs. 285 and concurrent enrollment in Semester 5 classes.


350. Workshops in Nursing. (1-4). Intensive study of special topics related to nursing practice, education, or research. Open to nonmajors.


352. Nursing Practice I. (3). 9P. Clinical course; provides the student opportunity to design and control nursing systems for adults with organic disorders, focusing on educative-supportive and partly and wholly compensatory nursing systems appropriate for adult client(s)/patient(s) demonstrating major health problems in contemporary society. Prerequisites: Phase I courses. Corequisite: Nurs. 354.

352H. Nursing Practice I, Honors. (3). 9P. Clinical course; provides the student opportunity to design and control nursing systems for adults with organic disorders focusing on educative-supportive and partly and wholly compensatory nursing systems appropriate for adult client(s)/patient(s) demonstrating major health problems in contemporary society. Emphasizes the expanded development of the clinical nursing role. Prerequisites: Phase I courses, GPA of 3.250, and instructor’s approval.


360. Secondary Care. (4). 18P; 4L (8 weeks). Clinical course emphasizes care for patients with acute illness and/or acute complications of chronic illness in secondary care settings. Focuses on the application of therapeutic interventions to maximize health potential in individuals from the young adult to the frail elderly. Prerequisites: Semester 5 courses. Corequisite: Semester 6 courses.


400. Introduction to Pathophysiology. (3). Cross-listed as H&S 400. For professional upper-division students enrolled in the College of Health Professions. Focuses on the essential mechanisms of disordered functions which produce common diseases. Discusses some common diseases, but as examples of the basic processes covered, not as a part of an exhaustive inventory. Presents the health professional with introductory knowledge of the physiological information he/she can broadly and quickly apply in his/her clinical or laboratory experience or use as a basic pathophysiology course before taking the more specific professionally related pathophysiology course. Prerequisite: admission to professional upper-division level in College of Health Professions or instructor’s consent.

402. Care Manager II. (3). Explores the social and economic impact of care management. A major component is the completion of a community assessment project. Includes professional issues, ethical-legal implications of practice, and leadership and management concepts. Prerequisites: Semester 5 courses. Corequisite: Semester 6 courses.

410. Tertiary Care. (3). 11P. Clinical course emphasizes patient care management of young adult to frail elderly individuals with complex health problems. Focuses on therapeutic interventions used to attain, maintain, or regain health within clients’ existing capabilities in a tertiary care setting. Prerequisites: Semester 6 courses. Corequisite: Semester 7 courses.


425-427. Special Projects in Nursing. (1-6). Elective. Individual study of selected topics, didactic and clinical experiences designed to enhance the student’s knowledge base and competencies in nursing practice. Repeatable. Prerequisite: school consent.


432. Educative-Supportive Nursing Systems. (3). 2R; 3L. Elective. Lecture/clinical course; focuses on the planning and implementation of patient education. The nurse’s role in patient education includes assisting the patients in decision-making, behavior control, and acquiring knowledge and skills. Emphasizes the development of the nurse’s ability to use teaching methods in clinical nursing situations. Builds upon the knowledge and clinical experiences of identified prerequisite courses. Enhances the knowledge and abilities of the student to educate individuals and small and large groups in a clinical setting. Prerequisites: Nurs. 340, 347, and 352, or instructor’s consent.

434. Perioperative Clinical Management: Workstudy. (5). 2T; 9P. Elective. Lecture/clinical course; examines the nursing needs of individuals in small groups that have various health problems requiring surgery. Focus is the expansion of the nursing student’s power to perform deliberate actions for the benefit and well-being of others in all phases of the surgical process (before, during, and after). Emphasizes the nursing student’s acquisition of clinical management skills in all phases of the surgical process. Prerequisites: Nurs. 340, 347, 352, or permission for 30 hours of a professional nursing program.

450. Care Manager III. (3). 2T; 7P. Provides the opportunity to apply care coordination principles to clients along the continuum of care. Emphasizes care of the client in the home setting. Examines issues related to professional nursing practice. Prerequisites: Semester 7 courses. Corequisite: Semester 8 courses.


464. Nursing Systems: Aging Families. (3). 2T; 3P. Provides information and experience in the design of nursing systems for clients/patients experiencing specific developmental stages in conjunction with normal and pathological changes associated with aging. Prerequisites: Nurs. 340, 347, 351, 352, and 354 or instructor’s consent. Open to nonnursing majors who have a license to practice nursing.


466H. Nursing Practice III, Honors. (3). 9P. Clinical course for evaluation and use of nursing and nursing-related theory and research in nursing. Emphasizes the expanded development of the clinical nursing role related to young families. Prerequisites: Nurs. 340, 347,
351, 352, and 354; GPA of 3.250; and instructor's consent.


472. Nursing Practice IV. (6). 18P. Practicum emphasizes the complexity of the design and control of nursing systems for individuals and groups. The student practices clinical nursing in a health care setting to synthesize nursing knowledge emphasizing the development of organizational and managerial skills. Prerequisites: Phase II nursing courses. Generic students must enroll concurrently in Nurs 473.

473. Senior Seminar. (3). Focuses on the leadership and management role of the nurse and the coordination of nursing care for groups of clients. Examines ethical-legal, economic, political, and other professional issues related to nursing practice. Prerequisites: Phase II courses. Corequisite: Nurs 472 for generic students.

473H. Senior Seminar Honors. (3). Focuses on the leadership and management role of the nurse and the coordination of nursing care for groups of clients. Examines ethical-legal, economic, political, and other professional issues related to nursing practice. An in-depth study of a concept related to leadership and/or management theories. Prerequisites: Phase II courses, concurrent enrollment in Nurs 472, 3.250 GPA, and school consent.

474. Nursing Practicum for RN-BSN Students. (4). 12P. Emphasizes the application of leadership and management principles to clients and staff in a health care setting. Prerequisite: prior completion of Nurs 340, 342. Prerequisite or corequisite: Nurs 473.

477. Theories Related to Nursing Practice. (3). Explores the role of theory in nursing. Examines foundational theories to nursing practice. Analyzes and synthesizes processes for integrating these theories in practice. Prerequisite: admission to School of Nursing.

478. Nursing Systems: Large Groups. (5). 2T; 4P. Studies nursing to large groups of people with multiple complex health problems. Assesses community health problems and practices design and control of nursing systems for large groups of people. Prerequisites: Phase I and II courses.

478H. Nursing Systems for Large Groups. (3). 9P. A clinical honors course for studying nursing for large groups with potential multiple complex health problems. Focus is health promotion throughout the life span. Emphasizes the expanded development of nursing agency in clinical nursing situations. Prerequisites: Phase II courses and school consent. Corequisite: Nurs 478.

481. Cooperative Education Field Study. (1-6). A field placement which integrates course work in a planned, supervised professional experience designed to complement and enhance the student's academic program. Individualized programs must be formulated in consultation with and approved by appropriate faculty sponsors and cooperative education coordinators. Students enrolled in Co-op 481 may follow one of two scheduling patterns: parallel, enrolling concurrently in a minimum of six hours of course work in addition to their co-op assignment, or alternating, working full time one semester in a field study and returning to full school enrollment the following semester; such students need not be concurrently enrolled in any other course. Prerequisites: successful completion of the freshman year and satisfactory academic standing prior to the first job assignment. May be repeated for credit.

499. Clinical Capstone. (4). 36P (5 weeks). An intensive clinical experience practicing full time with a preceptor in a primary, secondary, or tertiary care setting to enhance socialization into the professional nursing role. Student focuses on a selected area of practice within the current health care environment. Prerequisites: Semester 7 courses and Nurs 450 and 470.

Courses for Graduate/Undergraduate Credit

505. Directed Study in Nursing. (1-4). Elective. Individual study of the various aspects and/or problems of professional nursing. Repeatable. Prerequisite: school consent.


531. Nursing and Computer Technology. (3). Focuses on basic terminology and use of computer software for nursing education, practice and administration. Opportunity for hands-on experience with microcomputers. Prerequisite: admission to the nursing program or instructor's consent. Previous knowledge of computers or computer technology is not required.

543. Women and Health Care. (3). Cross-listed as Wom. S. 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 nonnursing majors.

700. Assessment of Pediatric and Adolescent Clients. (3). 2R; 3L. A theoretical and clinical laboratory experience; students focus on the assessment of pediatric and adolescent clients. Open admission to RN and graduate students.

701. Advanced Health Assessment. (2). Designed to assist students to refine history taking, psychosocial assessment and physical assessment skills. Content focuses on assessment of individuals throughout the life span. Emphasis on 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.

702. Advanced Health Assessment Laboratory. (1). Companion laboratory course for Nurs 701. Apply history taking and assessment skills within a laboratory setting. Emphasizes differentiation, interpretation and documentation of normal and abnormal findings. A complete history and physical examination of a client will be required. Prerequisite: admission to graduate nursing program.

703. Scientific Inquiry I. (3). Emphasizes the role of theory in scientific inquiry in nursing. The evolution of nursing theory is traced and projections for the future are explored. Relationships among theory, research and practice are addressed. Selected models/frameworks relevant for nursing are analyzed. Prerequisite: admission to graduate nursing program.

704. Health Maintenance of the School Age Child. (3). Examines and applies major theories, clinical concepts and research studies related to school health nursing. Open to RN and graduate students.

705. Scientific Inquiry II. (3). Builds on Scientific Inquiry I. Discusses the research process in relationship to concepts, frameworks/theories. Various methodological approaches to research are explored. Consideration is given to current issues in nursing research. The research process is demonstrated in a preliminary proposal related to student's practice area. Prerequisite: Nurs. 703 or departmental consent.

706. Organization and Management of the School-Health Program. (3). Examines and applies concepts of organization and management to the school-health delivery system. Explores political, economic and social factors which influence the school-health delivery system. Open to RN and graduate students.

707. Analysis of Complementary Health Care Modalities. (3). Analyzes the theoretical and empirical basis for various 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 and emotional state most responsive to therapeutic interventions. Emphasizes total evaluation and support of health influences on lifestyle, environment, culture and other cognitive and affective factors. Prerequisite: instructor's consent.

708. School Nurse Practicum. (2). 6L. 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.

715. Advanced Nursing Practice: Roles and Issues. (3). Designed for student preparing for advanced practice. Historical development of advanced practice role, the ethical, legal, politi-
For the student preparing for advanced practice in psychiatric nursing, considers neurotransmitters, neuroanatomy, neurotransmitters in the assessment and intervention approaches to the brain disorders of major mental illnesses. Prerequisite: admission to graduate program.


791. Special Studies in Nursing. (1-6). Students engage in extensive study of particular content and skills directly or indirectly related to nursing practice. Repeatable. Prerequisites: admission to Graduate School and school consent.

793. Advanced Pathophysiology. (3). Explore in-depth scientific knowledge base relevant to selected pathophysiological states confronted in primary care. 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 permission of the school.

795. Applied Drug Therapy. (3). Discusses the clinical application of specific categories of drugs, commonly encountered in primary care settings. Expects 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 age and appropriate content related to pharmacokinetics, dosages, expected outcomes and side effects of the drugs. Address first-line versus second line drugs, alternate drugs, drug interactions, adjusting drug dosages, patient education and compliance issues related to drug therapy. Explore 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 permission of the school.

796. Nursing Practicum in Special Setting. (0-6). Opportunity for directed practice in various settings including clinical specialties, nursing administration, nursing education and consultation. Prerequisites: admission to Graduate School and departmental consent.

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: admission to Graduate School and school consent.

Courses for Graduate Students Only

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. 715, 793, 795 and 805 may be taken concurrently. Corequisite: Nurs. 804.

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. Prerequisites: Nurs. 701, 702, 793, 795; open to Nurse Practitioner students only; concurrent with or subsequent to Nurs. 803. Corequisite: Nurs. 803.

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. Prerequisites: Nurs. 701, 702, 703 and 705.

808. Advanced Role Practicum. (3). 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, pathophysiology (Nurs. 781 or 793) and at least 6 hours of a clinical concentration.

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: all core courses, Nurs. 786, 793, 803, 804 and 805, Nurs. 715 and 795 may be taken concurrently. Corequisite: Nurs. 810.

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: all core courses, Nurs. 718, 786, 803, 804, 805 and 793. Corequisite: Nurs. 809.

811. Foundations of Nursing Administration. (3). Assists the student in acquiring theoretical
knowledge of organizations. Considers current issues and research in nursing administration and impact on nursing practice. Prerequisite: school consent prior to registration. Prerequisites or corequisites: Nurs. 701, 702, 703, 705 and 715.

812. Nursing Administration Practicum. (3). Practicum in a nursing administration setting: student, under professional guidance, becomes directly involved. A seminar accompanies the field experience. Types of experience may include roles in nursing education or service, mid-level nursing administration, staff development or community health. May be repeated twice. Prerequisite: Nurs. 811 or 827 or concurrent enrollment.

813. Foundations of Nursing Education. (3). Assists the student explore theoretical and practical aspects to curriculum development and teaching of nursing in higher education and continuing education. Prerequisite: school consent. Prerequisites or corequisites: Nurs. 701, 702, 703, 705 and 715.

814. 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: school consent and Nurs. 813.

815. 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, 705 and 715.

816. Thesis. (1-6). Graded S/U only. Student, in conjunction with the academic advisor and a three-member thesis committee, designs and conducts a formal research project. Prerequisites: admission to Graduate School and school consent prior to registration.

817. Psychiatric/Mental Health Nursing: Practicum I. (3). Intensive clinical experience; student plans, implements and evaluates nurse-therapist strategies with individual clients/patients. A seminar accompanies the practicum. Prerequisite or corequisite: Nurs. 819.

825. 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 student's faculty advisor. Prerequisites: admission to Graduate School and school consent.

825. Independent Study. (1-6). Provides opportunity for the student to develop, in collaboration with a school faculty member, objectives and project for independent work related to the practice of nursing. Prerequisites: admission to Graduate School and school consent.

827. Resource Management in Nursing. (3). Focuses on the assessment of human and material resources and informational systems needed to manage nursing care delivery. Emphasizes Nursing Personnel Management, patient classification systems, costing out of nursing services, strategic planning and marketing. Prerequisites: Nurs. 701, 702, 703, 705 and 715.

829. Health Care during Growth and Development of Children and Families. (1-4). Focuses on physical and psychosocial developmental changes from infancy through young adulthood. Considers factors that facilitate or interfere with healthy development. Provides an understanding of the role of family, family system, and family stress. Emphasizes the role of the Advanced Practice Nurse in assisting children and families during the developmental years. Modular format allows students to select specific units: Unit One: Growth and Development: The Infant and Young Child (1 credit); Unit Two: Growth and Development: The Adolescent and Young Adult (1 credit); Unit Three: Family Issues: Part I and II (1 credit each). Prerequisites: Nurs. 701, 702, 703, 705, and 715. Nurs. 715 may be taken concurrently.

832. Pediatric and/or Women's Health Nursing: Practicum I. (3), 9P. An intensive clinical experience; student focuses on the process of systematic developmental, psychosocial and health assessment of individuals within a family system. Emphasizes experiences based on the student's clinical interests. Prerequisite: completion of core courses. Corequisite: Nurs. 829.

833. Adult Nursing Practicum. (3). An intensive clinical experience; student designs, implements and evaluates nursing care for adults. Selects specialized areas of study; may involve health maintenance or illness care of acutely or chronically ill adults. Prerequisites: all core courses, Nurs. 781 and 795. Nurs. 805 or 839 may be taken concurrently.

835. Nursing the Family as the Client. (3). Focuses on nursing of the family as client. Seminars enable students to investigate major theories, clinical concepts, research, and political/legal/ethical issues related to nursing of the family as the client. Prerequisites: Nurs. 701, 702, 703, 705, 715, 829 and 832.

836. Pediatric and/or Women's Health Nursing: Practicum II. (3). An intensive clinical experience; student analyzes, prioritizes and designs therapeutic interventions in the management of common health problems affecting individuals and family systems. Emphasizes background and current family issues. Prerequisites: completion of all core courses and Nurs. 805. Nurs. 835 may be concurrent.

839. Management of Acute and Chronic Health Problems of the Adult. (3). Examines clinical concepts and issues related to major disruptions in the health status of adults. Emphasizes assessment, measurement and interventions related to acute and chronic health problems. Prerequisites: all core courses, Nurs. 781 and 795. Nurs. 805 may be taken concurrently.


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 functioning, and positive behaviors. Prerequisites: Nurs. 701, 702, 703, 705, 718, and 786. Nurs. 793 and 805 may be taken concurrently. Nurs. 848 may be concurrent or may follow this course.

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: previous courses in the PNP specialization and departmental consent. Prerequisite or corequisite: Nurs. 847.

849. Nurse Practitioner Preceptorship. (3 or 6). A concentrated clinical practicum in an acute or chronic 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. Prerequisite: departmental consent.

851. Clinical Data Management. (3). Management of clinical data and its relationship to advanced nursing practice. Existing data from clinical practice settings identified and analyzed for presentation both verbally and in report form. Emphasizes using existing data both to determine health care outcomes and to evaluate delivery of care. Communication of findings will occur. Prerequisites: completion of core courses and at least 6 hours of clinical concentration. Computer literacy is an expectation.

852. Adult Case Management Practicum. (3). Applies case management principles in an intensive clinical experience as the student designs, implements and evaluates nursing care for adults. Emphasizes measuring clinical outcomes and management of resources. Pre-
requisites: all core courses, Nurs. 781 and 795. Nurs. 805 or 839 may be taken concurrently.

853. Reproductive Health of Women. (3). Examines women's health issues and promotes positive self-care practices for common health problems. Includes epidemiology, assessment data, diagnostic methods and self-care interventions. Emphasizes health education and counseling to women during the life cycle and health care resources for women's health. Prerequisite: admission to graduate program or instructor's consent.

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: all core courses, Nurs. 781, 795, 805, 839 and 3 hours of practicum.

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. Includes children with developmental and learning disabilities and children with select complex and chronic health problems. Seminars focus on analysis and evaluation of clinical situations and cases. Prerequisites: previous courses in the PNP specialization and departmental consent. Prerequisite or corequisite: Nurs. 857.

858. Pediatric Primary Care II Practicum: Clinical Management of Common Health Issues. (3). A concentrated clinical practicum that emphasizes assessment and management of health promotion, health maintenance, and risk reduction for children and adolescents with special health care needs. Emphasizes comprehensive assessment, diagnosis, and management of health, developmental, and chronic health problems within a family and developmental framework. Includes children with developmental and learning disabilities and children with select complex and chronic health problems. Seminars focus on analysis and evaluation of clinical situations and cases. Prerequisites: previous courses in the PNP specialization and departmental consent. Prerequisite or corequisite: Nurs. 857.

859. Pediatric Primary Care III: Advanced Health Care for School Nurse Practitioners. (3). This multidisciplinary course builds upon the dimensions of assessment and health care for children and adolescents in a family and community framework and provides a foundation for advanced practice in school health from the perspectives of educators and health care providers. Focuses on major contemporary issues that affect the health and education of children and adolescents in the school community. Considers theories, models, and concepts from education, public health, and nursing as they relate to schools. Focuses on the link between health and education. Examines political, sociological, economic, and environmental factors, as well as major causes of morbidity and mortality. Special emphasis on cultural diversity and vulnerable and underserved populations-at-risk and strategies that enhance learning and health promotion. Prerequisites: previous courses in the PNP specialization or instructor's consent.

860. Pediatric Primary Care III Practicum: School Health Practicum. (3). A clinical course to prepare the student for advanced practice as a Pediatric/School Nurse Practitioner. Focuses on the health promotion, health maintenance, and risk reduction for children and adolescents with special health care needs; and the assessment and management of health and developmental problems within a family and developmental framework. Considers children with developmental and learning disabilities and children with select complex and chronic health problems. Emphasizes the collaborative and interdisciplinary nature of a child's care in a school setting. Addresses the unique needs of children in underserved communities. Prerequisite: departmental consent.

School Nurse
The following curriculum plan is recommended for registered nurses who desire school nurse certification but who do not wish to pursue a degree.

Students generally take three courses in the College of Education and three courses in the School of Nursing. The total program requires 14-18 credit hours. Contact the School of Nursing for details.

The following abbreviations are used in the course descriptions: T stands for theory and L for laboratory. For example, 4T; 2L means four hours of theory and two hours of lab. P stands for practicum/clinical hours; 40P means 40 hours of practicum per week.
Fairmount College of Liberal Arts and Sciences

David Glenn-Lewin, PhD, Dean

Fairmount College of Liberal Arts and Sciences is committed to the living traditions of the liberal arts and sciences, which recognize and affirm the dynamic nature of the world, the dignity and importance of all societies, and the need for citizens to be prepared for a changing future. The members of our richly varied disciplines are united in their mission to expand, preserve, and transmit knowledge. We believe that a love of learning enhances the quality of life, for individuals and the community.

Fairmount College of Liberal Arts and Sciences offers undergraduate majors in the natural sciences, social sciences, and humanities, and programs of professional training. An education in these disciplines helps students develop critical thinking skills, knowledge and appreciation of our physical and biological world, the arts, and different cultures, and an awareness of civic responsibilities, as well as professional preparation. The college also provides courses in basic skills, as well as general education, and other courses required for graduation from other colleges at WSU. These provide students with skills that are intrinsically valuable and often fundamental to professional training and the needs of the workplace.

Degrees Offered

Undergraduate

The Associate of Arts, Bachelor of Arts, Bachelor of Science, and Bachelor of General Studies degrees are conferred by Fairmount College of Liberal Arts and Sciences. Each baccalaureate degree requires the completion of a minimum of 124 credit hours, the attainment of an overall grade point average of 2.000 including transfer work, a grade point average of 2.000 in the major and minor fields of study, and a 2.000 WSU grade point average.

The Associate of Arts degrees require completion of a minimum of 65 credit hours including 15 hours in residence at Wichita State University and 50 of the 65 credits from liberal arts and sciences departments. This degree must include the 42 credit hours required in the University's General Education Program (described on page 19), and students must be enrolled in one of the University's degree-granting colleges. A cumulative grade point average of 2.000 is required for the degree as well as a 2.000 for WSU academic work.

Bachelor of Arts degrees are offered in anthropology, biological sciences, chemistry, communication, communicative disorders and sciences, computer science, classical languages, economics, English, French, geology, German, history, mathematics, minority studies, philosophy, physics, political science, psychology, social work, sociology, Spanish, and women's studies. Bachelor degrees in linguistics and religion were phased out beginning in 1987 and American studies was discontinued in 1993; however, students in these programs will be accommodated through emphases within the general studies program or through incorporation in a field major.

The Bachelor of Science is available in biological sciences, chemistry, computer science, criminal justice, geology, gerontology, mathematics, and physics.

The Bachelor of General Studies requires breadth in distribution of course work and allows for the development of areas of concentration which may be thematically or occupationally related. This degree is available through every college department.

Graduate

Graduate programs are offered through the Graduate School in many liberal arts and sciences areas. The Master of Arts (MA) may be earned in anthropology, communication (interdisciplinary), criminal justice, English, gerontology, history, political science, psychology, sociology, and Spanish. The Master of Science (MS) can be obtained in biological sciences, chemistry, computer science, geology, mathematics, and physics.

The Master of Computer Science (MCS) is awarded in computer science; the Master of Fine Arts (MFA) in creative writing; the Master of Education (MED) in speech; the Master of Arts in Liberal Studies (MALS) in interdisciplinary studies; and the Master of Public Administration (MPA) in public administration.

The Doctor of Philosophy (PhD) degree is offered in chemistry, applied mathematics, and psychology—human factors and community/clinical.

For more information, consult the Wichita State University Graduate Bulletin.

Policies

Admission

Students are admitted to Fairmount College of Liberal Arts and Sciences upon meeting the general admissions requirements for Wichita State University and upon declaring intention to pursue one of the degree programs offered by the college.

Probation and Dismissal Standards

Students are placed on probation whenever their cumulative WSU grade point average falls below 2.000. Probation is removed when the overall WSU grade point average reaches the required 2.000 level. Students continue on probation when they earn a 2.000 or better semester average and their overall WSU grade point average remains below 2.000. If students on probation fail to earn at least a 2.000 semester average, and if their WSU overall grade point average remains below 2.000, they will be dismissed. Students on probation will not be academically dismissed unless they have attempted at least 12 hours after being placed on probation. When dismissed, students may re-enroll only with the permission of the college's Committee on Admissions and Exceptions.

Academic Advising

Students planning to major in a program in Fairmount College enter the college directly upon admission and receive advising from department faculty. Academic advising is a sustained and comprehensive, developmental process in which students interact with faculty in planning courses of study appropriate to their life goals and career aspirations. Students who have early and sustained involvement in their major departments develop methods of inquiry, peer and mentoring relationships, and intellectual and social perspectives which deepen and enrich their college experience and support their achievement and persistence. Declaring students with professional, traditional, and interdisciplinary interests also benefit from discussions with
facult advisors qualified to discuss educational programs leading to the exercise of civic and social responsibility, to the enjoyment of intellectual pursuits, and to the realization of career fulfillment. College advising and records staff offer students assistance in becoming acquainted with departmental requirements, programs, and faculty, and assist with special advising and degree-completion procedures.

Application for Graduation
To insure a close identification of each student with his or her department, the faculty of the department of a student's major or primary major of concentration provide academic advising. In addition to advising for preregistration and registration, the departmental undergraduate advisor will fill out a graduation plan with each student who has completed 90 credit hours. Completion of this plan provides guidance to the student in meeting graduation requirements.

Students planning to receive the Bachelor of General Studies degree will declare their intention at least 30 hours before the degree is granted. A plan of study including the area of concentration should be initiated as soon as possible—but no later than 30 hours before the degree is granted—with the Bachelor of General Studies advisor in the primary department of interest (see Area of Concentration in Section XII below). The plan of study must be approved by the BGS Policy Committee, a subcommittee of the Curriculum and Academic Planning Committee of Fairmount College. This plan will be submitted along with other application for graduation materials to the Liberal Arts and Sciences dean's office. Thirty credit hours must be completed after the student's declaration to pursue the Bachelor of General Studies degree is filed.

Applications and degree cards may be obtained from any college department office.

Assessment of Academic Programs
Fairmount College of Liberal Arts and Sciences participates in a University-wide program to assess the effectiveness of all curricula and instruction within the university. Individual departments within the college have established assessment strategies which are shared with their majors. In most cases, assessment activities involving students occur in the final semester of enrollment before the degree is granted.

Cross-Listed Courses
Selected courses in the University curriculum are cross-listed because course content is suitable to more than one academic area. Every department or program which offers cross-listed courses provides a separate catalog description. When enrolling in cross-listed courses, students—in consultation with their advisor—may select the listing under which they wish to receive credit, but credit may be earned under only one of the course listings.

Field Trips
Attendance on field trips is mandatory in any course that includes in its Catalog description a statement that field trips are required or in which the instructor states that field trips are essential for earning credit. Absences are permitted only with the instructor's approval. Students may have credit withheld for a course if they do not complete the required field trips.

Credit for Life Experience
Fairmount College of Liberal Arts and Sciences offers credit for life experience when a student's learning from life experiences would duplicate the content of a course offered in the Catalog, when the student has worked with the faculty member authorized to teach that course to document the learning from that life experience, and when the faculty member has ascertained that the documentation supports the award of credit.

While some other universities fit college credit to the student's experience, Fairmount College (the only college at Wichita State to award such credit) requires that the learning from life experience fit the approved curriculum of the college. We are conservative in protecting the autonomy of the faculty and the goals of the curriculum. In keeping with these objectives, the faculty assist students in demonstrating their mastery of the content of a class with means appropriate to the particular class.

Students who are authorized by faculty to develop a portfolio or other documentation to seek life experience credit must be admitted to Wichita State University and must pay a nonrefundable assessment fee to the Office of the Controller. Students will be advised of fees upon entering the program. The faculty member sends a memo authorizing the (ungraded) credit to the college office. Credit is awarded and is noted on the student's transcript.

Cooperative Education
Fairmount College of Liberal Arts and Sciences participates in the Cooperative Education program which finds paid internships for undergraduates and graduates who wish to combine their classroom studies with academically related employment.

Further information is available in the Cooperative Education office, 125 McKinley Hall, or the academic information section of the Catalog.

Certificate Programs
Certificate programs are available in Fairmount College of Liberal Arts and Sciences to professionals in the community, to students who have already earned degrees, and to students pursuing degrees in Fairmount College or other degree-granting colleges. A certificate is awarded acknowledging a student's completion of a disciplinary or interdisciplinary focus consisting of courses which provide thematic coherence in a unique area of applied or theoretical work. Specific requirements for the following certificate programs may be reviewed in the departmental sections that follow:

- Applied Communication—Elliott School of Communication
- Corrections; Forensic Criminology; Law Enforcement; and Public Management—Hugo Wall School of Urban and Public Affairs
- Film Studies—English
- Information Technology—Computer Science
- Substance Abuse Counselor Training—Psychology
- Women's Studies—Women's Studies

Academic Honesty and Code of Conduct
The faculty of Fairmount College of Liberal Arts and Sciences strongly endorses the statement on academic honesty appearing in the general information section of this Catalog and the Code of Conduct and appeals procedure outlined in the Student Handbook.

Requirements for Graduation
Bachelor of Arts,
Bachelor of Science,
and Bachelor of General Studies
The following college requirements must be met in order for students to receive the Bachelor of Arts (BA), the Bachelor of Science (BS), or the Bachelor of General Studies (BGS) degrees from the college.
Courses taken to fulfill these requirements also satisfy the University's general education distribution requirements. The requirements for the BA, BS, and BGS fulfill all University graduation requirements except the following:

I. Basic skills — The following courses must be completed in the first 48 college hours with a grade of C or above.

- Engl 100 or 101 and 102, English Composition
- Math 111 (or higher), College Algebra, or Math 131, Contemporary Math

II. Literature. All BA, BS, and BGS candidates must complete at least one course in English or foreign language literature. Inclusion of this course should be considered in general education course planning in humanities.

III. American Political System. All BA, BS, and BGS candidates must demonstrate proficiency in the field of the American political system and institutions by passing either History 131Q or 132Q (humanities) or Political Science 121Q (social sciences) or by passing an examination offered each semester by the history and political science departments. Inclusion of any of these three courses should be considered in general education course planning.

IV. Social and Behavioral Sciences*. Candidates for the BA and BGS degrees must take 12 to 15 hours in three different departments from the following distribution: 1) one introductory course from two different social and behavioral science disciplines listed below; plus 2) a further study course from the same discipline as one of the introductory courses or an Issues and Perspectives course in the social and behavioral sciences; and up to two additional courses may come from the student’s major or from any other elective courses within social science departments within the college.

Candidates for the BS degree must take a minimum of three courses (nine hours) following the first two distributions above. Courses within the student’s major may not apply to this University general education requirement.

V. Natural Sciences and Mathematics (approved for University general education program): biology, chemistry, geology, physics, other approved discipline for an Issues and Perspectives class.

Other Natural Sciences and Mathematics for elective use: Anthr. 101Q and 106 (counts as biology); Geog. 201 and 235 (count as physical science).

The Schedule of Courses produced each semester before enrollment outlines specific courses approved in each of the above categories.

VI. Students must complete at least one and not more than two issues and Perspectives courses to fulfill University general education program requirements. In addition, courses within the student’s major discipline do not count toward University general education program requirements.

VII. Foreign Languages. Candidates for any BA degree and for the BS degrees in criminal justice and gerontology must demonstrate proficiency at a level equivalent to five hours beyond the 112 course in one foreign language or equivalent to the completion of the 112 course in two foreign languages. This proficiency may be demonstrated in either of the following ways:

1. Students may successfully complete 111 and 112, plus five additional hours in one foreign language, or 111 and 112 in two foreign languages
2. Other foreign language experience, or high school foreign language
study at the rate of one high school unit for each college semester, may apply toward the required proficiency.
3. Students who have completed three or more years of one language in high school may fulfill the foreign language requirement by successfully completing a 3-hour intermediate-level class in the same language.
4. Students with English as their second language have met the college’s foreign language requirement for a baccalaureate degree.

Language 210Q classes, although approved to count towards humanities requirements in the general education program, will not fulfill a humanities course requirement for Fairmont College of Liberal Arts and Sciences students. Any language course from the 220 or above level will count as general education humanities credit if on the approved list of classes published in the University Catalog.

A student who has credit in two years of a high school foreign language may enroll in 111 and 112 for credit without departmental consent.

A student who has credit in three or more years of high school foreign language may take 111 and 112 for credit only if departmental consent has been received in writing. Otherwise, a student who has credit in three or more years of a high school foreign language may enroll in any 200-level course for credit without departmental consent.

Students with sufficient high school background in language study to merit placement in a college language class beyond the 111 level may qualify for retroactive credit in language. Please see guidelines for retroactive credit outlined in the Modern and Classical Languages and Literatures departmental section of the Catalog.

Candidates for the BS within the division of natural sciences and mathematics have no foreign language requirement unless it is required by the department.

The BGS also has no foreign language requirement.

VIII. BA, BS: Major. All specific departmental major courses and requirements are listed in the Catalog by departments. While the department controls its own requirements for the major, the following expectations apply to all department majors:

1. A 2.000 grade point average is required in the major.
2. No more than six hours from the major may be used to satisfy college distribution requirements.
3. Courses with a G suffix may not be used as hours in the major or in the primary department of a BGS area of concentration unless approved by the department.
4. At least 12 upper-division hours are required in the major or area of concentration.
5. No more than 45 hours in the major may be used for graduation with a BA degree and no more than 50 hours in the major may be used for graduation with a BS degree.
6. The same hours cannot be used to satisfy requirements for two or more majors or minors or combination thereof.

IX. Combined Major. A BA degree with a combined major, consisting of 24 hours from one field of study and 12 hours from an allied field of study, may be designed with the assistance of the primary department’s academic advisor. A minimum of 12 upper-division hours must be included in the combined major.

X. Field Major. Field majors in biochemistry, chemistry/business, classical studies, and international studies are available. Other field majors may be designed by students who wish to select three or more correlated areas of study and develop an acceptable plan of course work. Field majors must adhere to the following rules:

1. At least 18 hours must be taken in one department and nine hours in each of two allied departments (36 hours total) with at least 12 of these hours upper division.
2. A plan of study must be developed in consultation with and approved by an advisor in the major area of study and the dean’s office of Fairmont College of Liberal Arts and Sciences.

XI. Minor. Minors are offered in geography and all fields of study in which a major may be earned. The number of hours required for a minor is set by each department. A 2.000 minimum grade point average is required in the minor. Minors from other colleges are acceptable and must meet minimum requirements of that college.

XII. BGS: Area of Concentration. The Bachelor of General Studies degree allows students to design their own programs of study crossing departmental or even college lines. The Bachelor of General Studies degree may allow the student to become a generalist and may allow preprofessional or nontraditional career students greater flexibility in planning for their unique future.

With the assistance of the Bachelor of General Studies advisor in the department of primary interest, each student pursuing a Bachelor of General Studies degree will develop a plan of study which outlines an area of concentration incorporating a minimum of 33 hours. No fewer than 15 and no more than 21 of these hours will be taken in a “focal” or primary department. The remaining 12 to 18 hours must be divided between at least two other departments. Concentrations may cross departmental or college lines in that they may be thematically or occupationally related. No general studies courses (“G” courses) will count toward the “primary” portion of the concentration but will be allowed in the additional portions. A minimum of 12 upper-division hours must be included in the concentration.

BGS students are given an opportunity to summarize their academic and intellectual goals in an assessment essay.

Distribution requirements limit course work to no more than 30 hours from one department, to no more than 60 hours in one division and to no more than 30 out-of-college hours.

XIII. Nonliberal Arts and Sciences Courses. Students may count only 24 hours of nonliberal arts and sciences courses toward either the BA or BS degree. 30 hours of nonliberal arts and sciences courses may count toward the BGS degree. (This includes courses taught outside of departments in the liberal arts and sciences.) Any nonliberal arts and sciences courses required by a major within the college will apply to LAS hours required for the degree.

Field Major
Students may select a major that correlates three or more fields of study to receive a broad appreciation of the cultural and dynamic factors of human conduct. The selection of courses must be made with an advisor from the primary department of interest and with the dean’s approval. Although such a major cuts across departmental lines and is determined by the field of specific interest, the combination of courses must be acceptable to the college. Normally 36 hours are required for the field major, with 18 hours in the major department and at least nine in each of the two allied departments. Students may work with an
academic advisor in developing an appropriate field major or may use one of the predesigned field majors indicated below. Students must meet BA graduation requirements for all field majors except biochemistry and chemistry/business which lead to the BS degree.

Biochemistry. Biochemistry is a rapidly growing science in which many important advances have been made in the last two decades. It requires both an understanding of biological processes and a knowledge of sophisticated techniques of chemistry and physics. The field major in biochemistry is designed to prepare students for employment or further study in this area.

Students choosing this field major should seek the advice of the chairperson of the Department of Biological Sciences or the Department of Chemistry as early as possible. Both the biological sciences and chemistry sections of the Catalog provide complete descriptions of this major.

Chemistry/Business. See the chemistry section of the Catalog for complete description.

Classical Studies. Classical studies is an interdisciplinary program designed to give students a sense of continuity and to interpret the values, ideas, and ideals of antiquity as shown in its history, art, mythology, literature, political institutions, and religions. The major also serves as a sound preparation for areas in which sensitivity to language and ideas is an important tool—classics, linguistics, ancient history, art history, archaeology, comparative literature, law, religion, and Near Eastern studies.

The major consists of 36 hours which must be selected from a list of approved courses, except that courses of independent study in one of the departments of the field major may count toward the major if the subject matter is at least half classical. For further information and a list of approved courses contact the Department of Modern and Classical Languages and Literatures.

International Studies. The program for the international field major is flexible and is designed to meet the need for specialists in foreign areas, international government or international economics, government, business, and international organizations. Students are prepared for careers in international organizations in the U.S. government and in business firms with international activities.

Two options are available: Option A is in area studies; Option B is a combination of area studies and international business.

No minor is required for either option. Students interested in Option A should contact the international studies advisor in the history department.

Communicative Disorders and Sciences
Students desiring an emphasis in applied language study should see requirements and curriculum for a major in communicative disorders and sciences through Fairmount College of Liberal Arts and Sciences listed in the College of Education section of the Catalog.

Special Preprofessional Programs
Advisors in the various preprofessional fields and closely related departments provide specific information regarding courses and requirements.

Prelaw
The Association of American Law Schools states that students interested in pursuing a law degree should get a broad undergraduate education that provides "comprehension and expression in words, critical understanding of the human institutions and values with which the law deals, and creative power in thinking." These qualities are to be achieved through disciplined study in fields of the student's choice. Requirements for the bachelor's degree provide students with both a general education and a concentration in a major field of study.

Law school admission requires completion of a baccalaureate degree. Many majors provide appropriate foundation for the study of law, and college advising staff offer prelaw students assistance in contacting departments for academic advising.

Premedical Professions—Medicine, Dentistry, Optometry, Pharmacy, Veterinary Medicine, Podiatry, Chiropractic

Medical programs encourage students to obtain a broad education in addition to the prerequisite studies in the sciences. Preparation for a professional program should include courses that develop disciplined thinking, intelligent appreciation of values, and sympathetic understanding of society and human interaction. Students may choose to major in any field of interest in preparation for medical studies. The primary core of prerequisite courses necessary for admission to most professional schools include one year each of English composition, math, biology, inorganic chemistry, organic chemistry, and physics.

Completion of a bachelor's degree is a general admissions requirement for the majority of medical schools. Some professional programs grant admission on the basis of a three-year preparatory program. Wichita State students on the three-year program may be granted the bachelor's degree if they have taken 94 credit hours (the last 30 must be at WSU) within the required fields of study and have completed general education requirements for the degree; earned 188 credit points with no more than 20 hours of D grade work; passed the first year of a medical professions program and qualified for admission to the second year. Candidates must apply for the degree through the college office.

Academic advising for premedical professions students is provided in the student's major department. Professional program application information is coordinated through the college office.

Preparation for Secondary Education
Students planning to teach in high school may pursue a Fairmount College of Liberal Arts and Sciences degree program while preparing to meet State Board of Education requirements for secondary education certificates. Programs for secondary education are outlined in the College of Education section of the Catalog.

Liberal arts and sciences majors form the base for many certified teaching fields, while the College of Education provides all professional education course work required for certification. For further details and information, contact a major department advisor in Fairmount College of Liberal Arts and Sciences or a teaching field advisor in the College of Education.

Administration of Justice
See Criminal Justice in Urban and Public Affairs, Hugo Wall School of.

American Studies
The Bachelor of Arts degree in American studies was discontinued in 1993. However, students currently enrolled in the program will be accommodated. An emphasis in American studies is available as a concentration in anthropology or a Bachelor of Arts degree field major through anthropology.

Anthropology
Anthropology is the comprehensive study of humanity in all of its manifestations and in all times and places. Anthropology is holistic and it examines aspects.
of human action—psychological, biological, social, and cultural—including technological, economic, religious, political, and artistic. Anthropologists explore the vast diversity of human cultures, striving to understand and appreciate the myriad ways of life that constitute alternative solutions to the universal problems of human existence.

Anthropology combines the perspectives of the sciences and the humanities. Its traditional four subfields (archaeological anthropology, biological anthropology, cultural anthropology, and linguistic anthropology) study human beings and human societies from an interdisciplinary perspective and from both evolutionary and humanistic points of view. The department offers a broad range of courses for majors and minors and for general education requirements. These courses provide students with opportunities to learn about, appreciate, and understand the values and perspectives of people from cultural traditions other than their own, and to improve their ability to interact successfully with them.

A major in anthropology consists of at least 30 semester hours, 15 hours of which must be chosen from a required list of courses. These 15 hours include an introductory course in biological anthropology, Anthr. 101Q; a course in cultural or general anthropology, 102Q or 124Q; a method and theory course, 647; an area course (choose from Anthr. 303Q, 307, 312, 506, 511, 515Q, 516Q); and one course in archaeology (choose from Anthr. 305Q, 313, 335, 509Q, 538, 611, or 613). An additional 15 semester hours of anthropology electives can be distributed across the catalog listings for anthropology to match the student’s interest in a particular sub-discipline(s).

A maximum of 6 semester hours of certain courses in related departments may be counted toward an anthropology major if they meet the particular needs of students and are approved by the anthropology department.

Minor. A minor consists of 15 semester hours in anthropology (including at least 6 hours of upper-division work) chosen in consultation with the student’s anthropology advisor. Students minoring in anthropology are encouraged to take Anthr. 101Q, either 102Q or 124Q, and 126G.

Field Major. A field major in anthropology enables undergraduate students to combine studies from three separate departments. The anthropology field major consists of 18 credit hours in anthropology, including at least 6 hours of upper-division work and 9 hours of related credit in each of two departments other than anthropology. Students seeking a field major in anthropology must take Anthr. 101Q, either 102Q or 124Q, and 126G. All remaining anthropology and non-anthropology hours for the field major are chosen in consultation with the student’s anthropology advisor.

Lower-Division Courses

>100G. Anthropology of Modern Life. (3) General education introductory course. Introduces anthropological perspectives on the behavior and institutions of contemporary people, emphasizing the mass culture of the United States.

>101Q. Biological Anthropology. (3) General education introductory course. Provides an introduction to the understanding of biological evolution and behavioral development of humans. Introduces the history and basic concepts of biological evolutionary thought; genetics and cell biology; human origins, ecology, and culture, along with the types of data and modes of analysis currently used in biological anthropology. Formulates explanations of physical and cultural developments of human and nonhuman primates in the last 70 million years. Explores patterns of human variation in biological and behavioral traits among present-day populations and discusses current issues (e.g., the social and biological meaning of variations).

>102Q. Cultural Anthropology. (3) General education introductory course. The meaning of culture, its significance for human beings and its diverse forms among peoples of the world, past and present.

104. Introduction to American Studies. (3) Examines the development of American studies as a discipline, focusing on the major American studies research approaches adopted from such areas as the humanities, social sciences, and linguistics. From their perspective as participants in American culture, students apply the techniques of interdisciplinary research to their own experience. Research approaches include quantitative analysis, semiotics, structuralism, literary formula theory, and others. Includes film, popular literature, ethnic and sex roles, cultural myths, television, fashion, sports, and advertising.

106. Biological Anthropology Laboratory. (1) Students collect and analyze data while learning to apply current techniques to the study of human and/or non-human primate skeletal, dental, and biological specimens. Prerequisite or corequisite: Anthr. 101Q.

107. Cultural Anthropology Laboratory. (1) Students participate in organizing, collecting, and analyzing data derived from cultural anthropological investigations. Prerequisite or corequisite: Anthr. 102Q.

>124Q. General Anthropology. (3) General education introductory course. Introduces the fields of physical anthropology, archaeology, and linguistics and an analysis of the concepts of society and culture emphasizing nonindustrial peoples of the world.

>126G. Introduction to Archaeology. (3) General education introductory course. Introduces the philosophy, theory, tools, and techniques of the practicing archaeologist. Illustrates the role or archaeology in understanding cultural change through time, and explains how archaeological method draws on natural science and humanities to demonstrate how we learn about past cultures from the material they left behind.

150. Workshop in Anthropology. (1-3). Provides specialized instruction using a variable format in an anthropologically relevant subject. Repeatable for credit.

165. The Blues: Art and Culture. (3) Cross-listed as Mus. C. 165. The blues is a uniquely American musical form that has made an immense contribution to world popular culture. The history of the blues is also the history of Black America from the late 19th century to the present day. Focuses on major blues artists, both rural and urban, to trace the history and development of the blues as a folk art form that expresses both the joy and the despair of the people who created it.

200. Intercultural Relations. (3) General education further studies course. Examines anthropological perspectives on the contact of individuals and societies which have different cultural histories. Examples are drawn widely from varied contemporary contexts: family life, international business, health and health care, the movement of populations, education in formal and informal contexts, and cultural strategies for survival in the global village.

201G. The American Hero. (3) General education issues and perspectives course. Defines historical, cultural, and environmental conditions that fostered the rise of many genres of American folk heroes. Examines representative heroes from colonial times to the present to see how they symbolize the American character.

210. Crime in America. (3) Studies crime in America from colonial times to the present. Explores the evolution of crime, crime as depicted in literature, crime as depicted in popular entertainment and popular attitudes toward crime and criminals.

281. Cooperative Education in Anthropology. (1-4). Provides practical experience that complements the student’s academic program. Consultation with and approval by an appropriate faculty sponsor is necessary. Offered CR/NC only.

Upper-Division Courses

>303Q. World Cultures. (3) General education further studies course. Comparative case studies of the cultures of existing societies of varying types, including nonindustrial peoples, Third World nations, and modern industrialized countries.

>305Q. World Archaeology. (3) General education further studies course. Introduces the basic concepts, methods, techniques, and modes of analysis of scientific archaeology. These are applied to a series of problems of increasing complexity: the emergence of
human culture, the development of domestic plants and animals, and the evolution of cities and complex societies.

>307. Peoples of Africa. (3). General education further studies course. A description and analysis of the culture areas of Africa south of the Sahara Desert from ethnohistoric and ethnographic sources.

>312. Asia Pacific Cultures. (3). General education further studies course. Studies of the cultures and nations in eastern Asia bordering the Pacific Ocean, focusing on historical background, cultural beliefs and practices, and the distinctive patterns of each.

>313. Archaeology of East Asia. (3). General education further studies course. A broad survey of archaeology throughout eastern Asia from the early hominid fossils at Peking and Java to the development of Chinese and Southeast Asian civilizations. Emphasizes China (through the Han Dynasty), southeast Asia and Australia/New Guinea. Includes recent archaeological finds of the Peoples Republic of China.

>315. Special Topics in American Studies. (1-3). General education further studies course. Analyzes special topics in American studies. Repeatable for credit.

>316. The 1960s in America. (3). General education further studies course. Examines the changes in cultural narratives from the Beat Generation of the 1950s to the end of the Vietnam Era. Covers the stretching of institutional boundaries by the creation of a cult of youth, the civil rights movement, free speech movement, and the introduction of Eastern thought into public dialogue. Prerequisite: 100G or instructor's consent.

>318. Psychological Anthropology. (3). General education further studies course. The relationship of individual psychology (personality, emotion, cognition), both normal and abnormal, to group membership and cultural context.

>327. Magic, Witchcraft, and Religion. (3). General education further studies course. Cross-listed as Rel 327. An examination of various concepts concerning the realm of the supernatural as held by various peoples around the world. Relates such religious beliefs and the resultant practices to the larger patterns of cultural beliefs and behaviors.

>335. Archaeology of North America. (3). General education further studies course. A survey of the prehistoric cultures of North America north of Mexico from the earliest peoples of the continent to the time of European colonization.


>344. Ecological Anthropology. (3). General education further studies course. Investigates the relationships of people both to their physical and sociocultural environments, including the effects of these relationships on economic activities, social organizations, and beliefs and behaviors emphasizing the evolutionary development of survival strategies.

>347. History of Anthropology. (3). An overview of the history of anthropology from the enlightenment through the middle of the 20th century. Emphasizes seminal events, theory, and contributions that shape the modern discipline of anthropology. Prerequisites: Anthr. 100G, 101 or 102 or 104.

>356. Human Variability and Adaptation. (3). General education further studies course. A critical examination of the biological aspects of human variation, stressing human adaptations. Prerequisite: Anthr. 101Q or Biol. 200Q or equivalent.

>351. Law, Politics, and Society. (3). General education further studies course. Studies legal and political systems in non-Western societies. Includes the origin of the state, precolonial law and politics, the impact of colonialism, and problems in state building.

>388. Cognitive Anthropology. (3). General education further studies course. Concentrates on a transcultural comparison of the cognitive constructions of life-space, social reality, and worldview in foraging, agricultural, and industrial societies focusing on the socioculturally conditioned aspects of intellectual functioning and perceptually based behavior.

450. The 1950s in America. (3). Promotes greater understanding of the diverse developments affecting the experience of Americans in the period 1945-1960. This period, referred to as "the fifties," is often regarded today with fond nostalgia. Examines major cultural currents of the time.


498. Readings in Anthropology. (2-3). Repeatable up to six hours. Special problems in anthropology. Prerequisite: 12 hours of anthropology.

499A. American Film Culture. (3). Using films as sources and resources of attitudes, values, and beliefs, course studies a variety of these "visual texts" in chronological order to examine such topics as attitudes towards blacks and women at various periods, crime and prohibition, patriotism during WWI and WWII, the Cold War mentality, and the rebellious youth culture of the Vietnam era. Examines the collective American mentality during the distribution of these films.

499C. The Western. (3). The western novel and western film serve both as popular forms of entertainment and as distinctive literary and cinematic genres with recognizable elements: plots, formulas, characters, settings, and situations. This distinctively American art form reveals much about American values, character, and beliefs during the last two centuries.

Courses for Graduate/Undergraduate Credit

502. Introduction to Archaeological Laboratory Techniques. (1-3). Maximum of three 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: Anthr. 124Q or 305Q.

>506. Peoples of the Pacific. (3). General education further studies course. A survey of the races, languages and cultures of nonliterate peoples of Polynesia, Micronesia and Indonesia.

>508Q. Ancient Civilizations of the Americas. (3). General education further studies course. A cultural survey of the Aztec, Maya and Inca. Prerequisite: Anthr. 124Q or instructor's consent.

>511. The Indians of North America. (3). General education further studies course. A survey of tribal societies and native confederations north of Mexico from the protohistoric through the historic period. Prerequisite: Anthr. 102Q or 124Q.


>514. Anthropology of Aging. (3). General education further studies course. Cross-listed as Geron. 514. An anthropological analysis of the latter stages of the life cycle with historical and cross-cultural perspectives.

>515Q. China. (3). General education further studies 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 have made during the 20th century following political revolutions, industrialization and expanding trade relations.

>516Q. Japan: People and Culture. (3). General education further studies 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.

>519. Applying Anthropology. (3). General education further studies course. The application of anthropological knowledge in the solution of social problems in industry, public health and public administration. Prerequisite: Anthr. 102Q or 124Q.

>522Q. Art and Culture. (3). General education further studies course. A survey of the visual and performing arts of nonwestern peoples with special attention to their relationships in the cultural setting. Prerequisite: Anthr. 102Q or 124Q.

>526. Social Organization. (3). General education further studies course. A survey of the varieties of social organization among nonindustrialized peoples throughout the world. Deals with family systems, kinship, residence patterns and lineage, clan and tribal organizations. Prerequisite: six hours of anthropology.

>528. Medical Anthropology. (3). General education further studies course. Studies the health and behaviors of various human soci-
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: Anthr. 502 and instructor's consent.

606. Museum Methods. (3). An introduction to museum techniques related 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.

539. 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: Anthr. 124Q or 305Q.

540. The Indians of the United States: Conquest and Survival. (3). An anthropological inquiry into four centuries of cultural contact, conflict, resistance and resilience. Prerequisite: Anthr. 102Q or 124Q or instructor's consent.

555. Paleoanthropology and Human Paleontology. (3). General education further studies course. Cross-listed as Wom. S. 542. Deals with the place of women in primitive and other non-Western societies, in various aspects of culture: political, economic, social, religious, domestic, intellectual, psychological and aesthetic. Compares and contrasts societies in order to see how different kinds of roles for women are related to different kinds of societies.

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 bones and tooth identifications, measurement and analysis and skeletal preservation and reconstruction. Individual projects are undertaken. Prerequisite: Anthr. 101Q or equivalent.


597. Topics in Anthropology. (3). Detailed study of topics in anthropology with particular emphasis being established according to the expertise of the various instructors.

600. Forensic Anthropology. (3). Cross-listed as C 600. Encompasses the area of criminal investigation involving biological evidence: blood, hair, fingerprints, dentition and skeletal system. Covers procedures of collection, preservation, marking, transportation, referral, laboratory analysis, classification and identification emphasizing anthropological interpretation. Prerequisite: Anthr. 101Q or equivalent.

609. Biological Anthropology Laboratory Analysis. (1-3). Analyze biological anthropology materials including human and nonhuman skeletal material of both forensic contemporary or prehistoric origin according to standardized methods for recording and data collecting in biological anthropology. Learn methods of identification, analysis, and interpretation and prepare a standard technical report. Prerequisites: Anthropology 101Q, 356 or 557.

611. Southwestern Archaeology. (3). General education further studies course. A comprehensive survey of the prehistoric, historic and living cultures of the Southwestern United States particularly emphasizing the cultural continuities and changes covering 11,000 years. Prerequisites: one introductory course in anthropology or departmental consent.

612. Indians of the Great Plains. (3). An investigation of the cultural dynamics of the Great Plains area from the prehistoric period to the present. Prerequisites: six hours of anthropology or departmental consent.

613. Archaeology of the Great Plains. (3). The archaeology of the Great Plains area from earliest evidence to the historic period. Prerequisite: one introductory course in anthropology or departmental consent.

647. Theories of Culture. (3). A survey of the main theoretical movements in cultural anthropology, including both historical and contemporary schools of thought. Prerequisites: six hours of anthropology.

651. Language and Culture. (3). Cross-listed as Ling. 651. An introduction to historical and descriptive linguistics. Deals with the ethnography of communications, lexicostatistics and linguistic determination. Prerequisite: six hours of anthropology.

667. English Syntax. (3). Cross-listed as Eng. 667 and Ling. 667. Examination of aspects of the structure of English and their relation to linguistic theory. Prerequisites: English 315 or Ling. 577 or Anthr. 577 or instructor's consent.

690. Field Methods in Anthropology. (3-6). A maximum of six 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.

701. Directed Readings in American Studies. (1-3). Prerequisites: six hours of American studies course work or equivalent and instructor's consent.

736. Advanced Studies in Archaeology and Ethnography. (3). Special area and theory problems in a historical approach to culture. Prerequisites: six hours of anthropology and departmental consent.

746. Advanced Studies in Cultural Anthropology. (3). Deals with the ethnography of the Great Plains, including social structure, economic and political organization, religion, personality, arts and knowledge systems, and current research methods. Prerequisite: six hours of anthropology.

750. Workshop. (1-4). Short-term courses focusing on anthropological problems. Prerequisite: instructor's consent.

756. Advanced Studies in Biological Anthropology. (3). Advanced studies in 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. Prerequisite: Anthr. 101Q or instructor's consent.

781. Cooperative Education. (1-4). Provides practical experience that complements the student's academic program. Requires consultation and approval by an appropriate faculty sponsor. Offered C/NC only. Prerequisite: Grade of C or better.

798. Introduction to Research. (3). Bibliography, methodology and the philosophy of research. Repeatable for a total of six hours of credit. Prerequisites: six hours of American studies course work or equivalent and instructor's consent.

799. Seminar in American Studies. (3). Individual conferences organized around a problem or problems presented by a representative figure, theme or period, i.e., the Industrial Revolution, Reconstruction, westward migration or Mark Twain and the Mississippi. Repeatable for a total of six hours of credit. Prerequisites: six hours of American studies course work or equivalent and instructor's consent.

Courses for Graduate Students Only

801. Seminar in Archaeology. (3). Comprehensive study of archaeological data emphasizing theoretical problems of interpretation and reconstruction. Repeatable up to six hours. Prerequisite: Anthr. 501 or departmental consent.
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 six hours. Prerequisite: departmental consent.

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.

837. Seminar in Cultural Anthropology. (3). Intensive study of advanced theoretical questions in cultural anthropology. Repeatable up to six hours. Prerequisite: five hours of anthropology.

847. Colloquium in Anthropology. (1-2). S/U grade only. Repeatable for a maximum of three 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 two credits. Prerequisite: graduate standing in anthropology.

848. Recent Developments in Anthropology. (3). A review of the latest discoveries and interpretations in the science of human beings. Repeatable up to six hours. Prerequisite: five hours of anthropology.

870. Independent Reading. (2-3). Repeatable up to six hours. Prerequisite: departmental consent.

871-872. Internship in Anthropology. (2-2). Students follow an applied or multidisciplinary track, such as museum, international business, or health professions. Prerequisite: departmental consent. Course need not require a tangible end product (e.g., paper). May be repeated, but limited to a total of 4 credit hours. Prerequisite: committee consent.

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 methods and theory to the specific needs of an institution, group, or population. Requires a tangible end product (e.g., paper, thesis, or visual production or exhibit). May be repeated, but limited to a total of 4 credit hours. Prerequisite: committee consent.

875-876. Thesis. (2-2).

**Biological Sciences**

The biological sciences department offers a broad and flexible curriculum leading to the Bachelor of Arts (BA), the Bachelor of Science (BS), the field major in biochemistry (BS), and the bachelor degree programs (BA and BS) to teach in secondary education. Students interested in an interdisciplinary program with a biological focus are encouraged to consider the Fairmount College of Liberal Arts and Sciences field major (BA) program. All students who intend to pursue one of the programs within the Department of Biological Sciences should contact the department as early in their educational careers as possible for assignment to a faculty academic advisor.

**Major.** A major in biological sciences leading to the Bachelor of Arts (BA) requires a minimum of 30 semester hours of biological sciences course work; up to 40 semester hours may be taken for credit. A major in biological sciences leading to the Bachelor of Science (BS) degree requires a minimum of 40 semester hours of biological sciences course work; up to 50 semester hours may be taken for credit. Candidates for either degree must complete 213Q, 204, 418, 419, 420, and either 497 or 499. Candidates for either degree must also complete two semesters of inorganic chemistry (typically Chem. 111Q and 112Q) and one semester of organic chemistry (typically Chem. 531). Candidates for the BS degree must also complete two semesters of physics (typically Phys. 213Q and 214Q). Candidates for either degree are required to take the Field Achievement Test in Biology during the senior year and contribute examples of their course work to the department's assessment program. All candidates must maintain a grade point average of 2.000 in all biological sciences course work.

**Minor.** Candidates for a minor in biological sciences must complete Biol. 203Q, 204, and any two of the following: Biol. 418, 419, or 420. Candidates for the minor must maintain a 2.000 grade point average in all biological sciences course work.

**Biochemistry Field Major.** The departments of biological sciences and chemistry participate jointly in this program. Required courses are Biol. 203Q, 204, 419, and 420; Chem. 111Q, 112Q, 523, 531, 532, 662, 663, and 664; and Math. 112 or 111 and 123). All courses required are Biol. (Chem.) 666 and 669 (two enrollments); and 21 elective hours chosen from among those approved for the biochemistry field major (see academic advisor or departmental offices for approved courses).

**Field Major (BA).** Students interested in environmental biology or related areas of environmental science should consult with a departmental advisor early to design a curriculum that will satisfy Fairmount College of Liberal Arts and Sciences field major requirements and will include course work with a broad focus on environmental biology.

**Major in Biological Sciences: Secondary Education.** This major allows for the completion of the requirements for a degree in biological sciences and the certification requirements to teach biology and general science—grades 7-12. Students selecting this option should work closely with the teacher education advisor. The Bachelor of Arts (BA) in Biological Sciences: Secondary Education requires the completion of Biol. 203Q, 204, 330, 418, 419, 420, 524, one four-hour course in Botany, and one of the following: Biol. 503, 560, 575, or 578. Also required are Chem. 111Q, 112Q, 523, and 531; Phys. 213Q, Geol. 302Q; Math 123; Cr 170P or 170M; Cr 772M or 772P or 780S; and the professional education requirements for majors in science as outlined by the College of Education. For the Bachelor of Science (BS) in Biological Sciences: Secondary Education, students must complete additional hours to total a minimum of 40 semester hours of course work in biological sciences (a maximum of 50 hours may be taken for credit) and Physics 214Q.

**Nonmajor Courses.** The Department of Biological Sciences offers courses designed primarily to meet the needs of students in other departments. These are listed below as "Nonmajor Courses." These courses, or their equivalents at other institutions, cannot be used to satisfy the biological sciences course work requirements for the major.

**Nonmajor Courses**

(May not be used to satisfy the requirements for the major)

**Lower-Division Courses**

>104(Q). Introducing Biology. (1). 3R; 2L. General education introductory course. A lecture course introducing basic concepts of biological science including characteristics of living organisms, structure and function of organisms with emphasis on human beings, mechanisms of inheritance, and interactions of humans with living and nonliving components
of various environments in the living world. The laboratory component includes experimental analysis of microbial growth, disease presentations as well as provide elaboration of some subject areas. Recommended for the non-science major. Only one of the following may be taken for credit: Biol. 104Q, 105G (no longer offered), 106G and/or 107G.

>106G. The Human Organism Laboratory. (1). 2L. General education introductory course. Introduces the non-science major to certain biological principles as they relate to the human organism, provides biological information and understanding of subjects which are relevant to the student's own well-being and role as a world citizen, and increases awareness of the human place in the biosphere. Concurrent or subsequent enrollment in Biol. 107G is recommended for students needing general education credit for a natural science laboratory experience. Credit for this course may not be applied toward the requirements for a major or minor in biological sciences. Only one of the following may be taken for credit: Biol. 104Q, 105G, 106G and/or 107G. Students wishing to repeat Biol. 105G (no longer offered) should enroll in Biol 106G and 107G.

200. Introduction to Microbiology. (4). 3R; 2L. For students in allied health fields. Introduces eucaryotic and procaryotic microorganisms and viruses and develops an understanding of microbial growth, including the use of antibiotics, diagnosed an disease. DNA as the genetic material including DNA replication, protein synthesis, gene regulation, mutation and gene exchange in bacteria; applied and environmental microbiology including water and sewage treatment and food microbiology; resistance to infection, basic mechanisms of pathogenesis, transmission and population genetics of humans. Attention to inborn errors of metabolism and development and the roles of genetic counseling and genetic engineering in their management. For students majoring outside of the natural sciences and does not carry credit toward a biological sciences major or minor. Students earning graduate credit produce a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisite: Junior standing.

518Q. Biology of Aging. (3). Cross-listed as Geront. 518Q. An introduction to the phenomena 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: Basic course in biological sciences that satisfies general education requirements.

>203Q. Introduction to Organismal Biology. (5). 4R; 3L. General education introductory course. Introduces the fundamental concepts of biology as they apply to multicellular organisms. Includes the advantages and problems of a multicellular habit; homeostatic systems involving nervous and hormonal control; nutrient procurement, circulation, use, and cycling in plants, animals, and communities; and asexual and sexual reproduction and inheritance in plants, animals, and communities. The laboratory includes a survey of representatives from the five kingdoms and stresses evolutionary trends in the plant and animal kingdom. Prerequisite: concurrent enrollment in Chem. 111Q is recommended.

305Q. Introduction to Cellular Biology. (5). 4R; 3L. Continuation of Biol. 203Q. Examines the principles of cellular biology and fully develops the cellular and molecular bases of phenomena discussed in Biol. 203Q. Includes the study of cellular structure and its relation to function; the cell and its organelles; the chemical basis of inheritance; nutrient procurement, use, and cycling in the cell in aerobic and anaerobic conditions and photosynthesis; regulation of cellular activities by protein synthesis, protein activity, and membrane mechanisms; and selected topics in cellular biology, such as the immune defense system, origin of eukaryotic organisms, abiotic origin of life, and the role of prokaryotes in matter cycling in the biosphere. The laboratory demonstrates the principles of cell biology and develops the student's skill in the experimental method and the communication of scientific information. Prerequisites: Biol. 203Q and Chem. 111Q.

Upper-Division Courses

106G. The Human Organism Laboratory. (1). 2L. General education introductory course. For the non-science major. Supplements and reinforces the material covered in Biol. 106G with a laboratory experience. Uses a hands-on approach and covers topics relevant to the students and their role in the biosphere. Includes cell structure, human organ systems, the role of microorganisms in our environment, nutrition, metabolism, genetics, and ecology. Requires completion of the major course and the science major. Credit for this course may not be applied toward the requirements for a major or minor in biological sciences. Only one of the following may be taken for credit: Biol. 104Q, 105G, 106G and/or 107G. Students wishing to repeat Biol. 105G (no longer offered) should enroll in Biol 106G and 107G.

Lower-Division Courses

120. Introduction to Organismal Biology. (1). 2L. General education introductory course. Presents the fundamental concepts of biology as they apply to multicellular organisms. Includes the advantages and problems of a multicellular habit; homeostatic systems involving nervous and hormonal control; nutrient procurement, circulation, use, and cycling in plants, animals, and communities; and asexual and sexual reproduction and inheritance in plants, animals, and communities. The laboratory includes a survey of representatives from the five kingdoms and stresses evolutionary trends in the plant and animal kingdom. Prerequisite: concurrent enrollment in Chem. 111Q is recommended.

203Q. Introduction to Organismal Biology. (5). 4R; 3L. General education introductory course. Introduces the fundamental concepts of biology as they apply to multicellular organisms. Includes the advantages and problems of a multicellular habit; homeostatic systems involving nervous and hormonal control; nutrient procurement, circulation, use, and cycling in plants, animals, and communities; and asexual and sexual reproduction and inheritance in plants, animals, and communities. The laboratory includes a survey of representatives from the five kingdoms and stresses evolutionary trends in the plant and animal kingdom. Prerequisite: concurrent enrollment in Chem. 111Q is recommended.

305Q. Introduction to Cellular Biology. (5). 4R; 3L. Continuation of Biol. 203Q. Examines the principles of cellular biology and fully develops the cellular and molecular bases of phenomena discussed in Biol. 203Q. Includes the study of cellular structure and its relation to function; the cell and its organelles; the chemical basis of inheritance; nutrient procurement, use, and cycling in the cell in aerobic and anaerobic conditions and photosynthesis; regulation of cellular activities by protein synthesis, protein activity, and membrane mechanisms; and selected topics in cellular biology, such as the immune defense system, origin of eukaryotic organisms, abiotic origin of life, and the role of prokaryotes in matter cycling in the biosphere. The laboratory demonstrates the principles of cell biology and develops the student's skill in the experimental method and the communication of scientific information. Prerequisites: Biol. 203Q and Chem. 111Q.

Upper-Division Courses

305Q. Introduction to Cellular Biology. (5). 4R; 3L. Continuation of Biol. 203Q. Examines the principles of cellular biology and fully develops the cellular and molecular bases of phenomena discussed in Biol. 203Q. Includes the study of cellular structure and its relation to function; the cell and its organelles; the chemical basis of inheritance; nutrient procurement, use, and cycling in the cell in aerobic and anaerobic conditions and photosynthesis; regulation of cellular activities by protein synthesis, protein activity, and membrane mechanisms; and selected topics in cellular biology, such as the immune defense system, origin of eukaryotic organisms, abiotic origin of life, and the role of prokaryotes in matter cycling in the biosphere. The laboratory demonstrates the principles of cell biology and develops the student's skill in the experimental method and the communication of scientific information. Prerequisites: Biol. 203Q and Chem. 111Q.

Upper-Division Courses

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Upper-Division Courses

305Q. Introduction to Cellular Biology. (5). 4R; 3L. Continuation of Biol. 203Q. Examines the principles of cellular biology and fully develops the cellular and molecular bases of phenomena discussed in Biol. 203Q. Includes the study of cellular structure and its relation to function; the cell and its organelles; the chemical basis of inheritance; nutrient procurement, use, and cycling in the cell in aerobic and anaerobic conditions and photosynthesis; regulation of cellular activities by protein synthesis, protein activity, and membrane mechanisms; and selected topics in cellular biology, such as the immune defense system, origin of eukaryotic organisms, abiotic origin of life, and the role of prokaryotes in matter cycling in the biosphere. The laboratory demonstrates the principles of cell biology and develops the student's skill in the experimental method and the communication of scientific information. Prerequisites: Biol. 203Q and Chem. 111Q.

Upper-Division Courses

305Q. Introduction to Cellular Biology. (5). 4R; 3L. Continuation of Biol. 203Q. Examines the principles of cellular biology and fully develops the cellular and molecular bases of phenomena discussed in Biol. 203Q. Includes the study of cellular structure and its relation to function; the cell and its organelles; the chemical basis of inheritance; nutrient procurement, use, and cycling in the cell in aerobic and anaerobic conditions and photosynthesis; regulation of cellular activities by protein synthesis, protein activity, and membrane mechanisms; and selected topics in cellular biology, such as the immune defense system, origin of eukaryotic organisms, abiotic origin of life, and the role of prokaryotes in matter cycling in the biosphere. The laboratory demonstrates the principles of cell biology and develops the student's skill in the experimental method and the communication of scientific information. Prerequisites: Biol. 203Q and Chem. 111Q.
419. Genetics. (3). The mechanisms of heredity and variation in animals, plants, and prokaryotes with a critical review of gene structure and function. Students who have completed BIOL 584 may not receive credit for prior enrollment in that course and subsequent enrollment in this course. Students seeking to repeat BIOL 584 may enroll in this course, subject to the credit limitations indicated. Prerequisite: BIOL 204.

420. Molecular Cell Biology. (4). 3R; 2L. Concerned primarily with the molecular biology of eukaryotic cells. The individual cellular components (organelles) and processes include the plasma membrane, mitochondria and energy conversion, intracellular sorting, the cell nucleus and genetic mechanisms, control of gene expression, cell signaling, cell growth and division, cancer, and cellular mechanisms of development. Reviews and demonstrates current techniques and experimental approaches for studying cells. Students who have completed BIOL 500 may not receive credit for prior enrollment in that course and subsequent enrollment in this course. Students seeking to repeat BIOL 500 may enroll in this course. Prerequisites: BIOL 204 and CHEM 531.

471. Wildlife Management. (4). 3R; 3L. Presents both theoretical and practical principles of wildlife management. Includes wildlife legislation, ecological rules applicable to wildlife populations, procedures for habitat analysis and inventory, and wildlife restoration. Conduct laboratory exercises and class projects at local field sites. Emphasizes habitat analysis and restoration during the field portion. Prerequisites: BIOL 418.

481. Cooperative Education. (2-4). Course complements and enhances the student's academic program by providing an opportunity to apply knowledge gained through course work to job-related situations. For information contact the coordinator of undergraduate studies or the Cooperative Education program office. No more than ten credit hours earned in BIOL 481 may be applied toward satisfying the requirements for a major in biological sciences. Prerequisite: applicant and cooperative education position approved by the departmental affairs committee. Offered Cr/NCr only.

497. Biology Colloquium. (1). S/U grade only. Research seminars presented by graduate students, faculty, and visiting researchers. Requires a written term paper on one of the presented topics. Repeatable once for credit. Prerequisites: two of the following—BIOL 418, 419, 420.

498. Undergraduate Independent Reading. (2-4). S/U grade only. Students perform library scholarship under the direct supervision of faculty and write a report. No more than six credit hours earned from BIOL 498, 499, or equivalent independent study courses may be applied toward departmental major graduation requirements. Prerequisites: at least 20 hours of biology course work that satisfies the major requirements; instructor’s consent; a Directed Independent Study Abstract form; and departmental consent.

499. Undergraduate Research. (2-4). S/U grade only. Students perform laboratory or field research under the direct supervision of faculty and write a report. No more than six credit hours earned from BIOL 498, 499, or equivalent independent study courses may be applied toward departmental major graduation requirements. Prerequisites: at least 20 hours of biology course work that satisfies the major requirements; instructor’s consent; a Directed Independent Study Abstract form; and departmental consent.

Courses for Graduate/Undergraduate Credit

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.

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. Course 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 instructor’s consent.

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 the instructor. Prerequisite: BIOL 204, BIOL 527 also is recommended.

525. Introduction to Ecotoxicology. (4). 2R; 2L. An overview of concepts and methodology for conducting tests in the field of ecotoxicology. Examines tests at the molecular, individual and population level. Covers basic ecological assessments, such as Index of Biological Integrity, Index of Biological Well-Being, and Rapid Bioassessment Protocols; and toxicological protocols like acute and chronic bioassays, biomarkers, and modeling techniques using Quantitative Structure Activity Relationships. Recommended for students interested in learning about the applied methodology used in the rapidly evolving field of ecotoxicology. Prerequisites: BIOL 418 or equivalent and CHEM 531, or equivalent, or instructor’s permission.

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.

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. Prerequisite: BIOL 204.

528. Parasitology. (4). 2R; 4L. 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. Prerequisite: BIOL 204.

532. Entomology. (5). 3R; 4L. An introduction to the morphology, physiology, life cycles, behavior, ecology and economic significance of insects. Students earning graduate credit produce a term paper based on the technical literature on a topic chosen in consultation with the instructor or develop proficiency in a specific taxon by performing an individual systems project. Prerequisite: BIOL 204.

534. Mammalian Physiology. (5). 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 and CHEM 531 or instructor’s consent.

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: concurrent or prior enrollment in BIOL 534.

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. Prerequisite: BIOL 204. BIOL 420 recommended.

553. Ecological Risk Assessment. (4). Risk assessment is the process of assigning magnitudes and probabilities to the adverse effects of human activities or natural catastrophes. It involves global climate change, habitat loss, acid rain deposition, reduced biological diversity, and the ecological impacts of pesticides and toxic chemicals. It uses measurements, testing, and mathematical models to quantify the relationship between the initiating event and the effects. Course is an overview of the basic framework for conducting an Ecological Risk Assessment, and a discussion of individual case studies involving several important environmental issues. An introductory class for students interested in assessing the effects of various stressors on environmental health. Prerequisites: BIOL 418 or equivalent and CHEM 531 or equivalent, or instructor’s permission.

560. Plant Ecology. (4). 2R; 6L. Principles and patterns of plant distribution and of adaptation of plants to particular habitats. Emphasizes the experimental approach to plant ecology. Field trips are an integral part of the laboratory. Prerequisite: BIOL 418 or instructor’s consent.
572. Computer Methods in Biology. (3). Includes mathematical modeling of biological systems, tools for recording and retrieving experimental results, computer-aided instruction, and development of 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 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.

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 biological questions using 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. Prerequisites: Stat. 370.

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 independent project on comparative community structure and report the results as a technical paper. Prerequisite: Biol. 418 or instructor's consent.

578. Aquatic Ecology. (5). 2R; 6L. 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. Prerequisites: Biol. 418 or instructor's consent.

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 and Chem. 351.

591. Immunobiology Laboratory. (3). 6L. Methods in immunization and techniques for qualitative and quantitative determination of antibody production and antigen-antibody reactions. Students earning graduate credit prepare a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisites or corequisites: Biol. 590, Chem. 351 or instructor's consent.

572. Computer Methods in Biology. (3). Includes mathematical modeling of biological systems, tools for recording and retrieving experimental results, computer-aided instruction, and development of 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 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.

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 biological questions using 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. Prerequisites: Stat. 370.

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591. Immunobiology Laboratory. (3). 6L. Methods in immunization and techniques for qualitative and quantitative determination of antibody production and antigen-antibody reactions. Students earning graduate credit prepare a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisites or corequisites: Biol. 590, Chem. 351 or instructor's consent.

610. Topics in Botany. (3-4). Selected offerings in botany. Consult the Schedule of Courses for current offering(s). Students wishing to enroll in courses not listed in the current Schedule must obtain permission from the instructor. 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. 204 and instructor's consent.

630. Behavioral Ecology. (3). A study of the biological basis of social behavior, stressing the underlying evolutionary and ecological mechanisms. Lectures will 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 will be expected to write a term paper based on the technical literature and to present this in a class seminar. Prerequisite: Biol. 418.

640. Topics in Zoology. (3-4). See Biol. 610. Prerequisite: Biol. 204 and instructor's consent.

654. Pathogenic Microbiology. (4). 2R; 4L. An introduction to the important pathogenic microorganisms and their relationships to health and disease in humans. Students earning graduate credit prepare a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisite: Biol. 330.

660. Topics in Microbiology. (2-4). See Biol. 610. Prerequisite: Biol. 330 and instructor's consent.

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, Chem. 662 and 663.

669. Research in Biochemistry. (2). Cross-listed as Chem. 669. 5/2/1 grade only. Primarily for students who choose the biochemistry field major. Requires participation in a biochemistry research project under the direction of a faculty member and a written report summarizing the results. May be repeated once for credit. Prerequisites: Biol. 420 or 500, Chem. 662 or 663 and Chem. 664 and instructor's consent.

702. Environmental Science I. (4). 2R; 3L. Cross-listed as Geol. 702 and Chem. 702. Advanced theoretical and applied principles of the interdisciplinary study of environmental science. Includes chemical cycling, atmospheric chemistry, aquatic chemistry, and phase interactions. The laboratory portion addresses local environmental problems from a risk assessment perspective. Biol. 702 and 703 (or equivalent) are required for all graduate students in the master's of environmental science program. Prerequisite: acceptance in the master's of environmental science program or instructor's consent.

703. Environmental Science II. (4). 2R; 3L. Cross-listed as Geol. 703 and Chem. 703. 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. Biol. 92 and 703 (or equivalent) are required for all graduate students in the master's of environmental science program. Prerequisite: acceptance in the master's of environmental science program or instructor's consent.

704. Environmental Science Colloquium. (1). Cross-listed as Geol. 704 and Chem. 704. Students in the master's of environmental science program 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.

705. Environmental Science Internship. (3-6). Cross-listed as Geol. 706 and Chem. 706. Students in the master's of environmental science program may gain interdisciplinary skills in environmental science by participating in applied and/or basic research internship projects with local business, industry, or government agencies. Internship option is an alternative to thesis research for degree requirements. Enrollment in internship projects requires an approved proposal. Completion of an internship for graduation requires a formal oral presentation of the internship activity and a written report. Prerequisites: Bio. 702 and 703 or equivalent.

720. Neurobiology. (3). Basic course in contemporary neurobiology emphasizing learning and memory. Exploration of the current research literature covering the role of neuropeptides in complex behavior to brain information processing pathways, neuronal cell biology, and molecular biology. Each student will choose a topic, complete a written report, and give an oral presentation to the class. Graduate students will do more reading in the primary neurobiology literature. Prerequisites: Biol. 420 and 534 or equivalents and instructor's permission.

737. Aquatic Toxicology. (4). 2R; 2L. 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 permission.

740. Research Methods. (3). 1R; 3L. A lecture/laboratory course to introduce graduate students to basic methods and instrumentation used in biological research. Prerequisite: Biol. 420.
sentations that will be the basis for their grade. One of these presentations may be their thesis defense. Prerequisite: acceptance into MS program.

798. Biology Seminar. (2). Reviews of current research in biological sciences; Repeatable once for credit.

Courses for Graduate Students Only

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.

891. Thesis. (2). S/U grade only. Students must be enrolled in this course during the semester in which the thesis is defended.

Chemistry

The chemistry department offers a broad and flexible curriculum leading to a variety of degrees and options: Bachelor of Science (BS) in chemistry, Bachelor of Science in chemical science, Bachelor of Arts (BA) in chemistry, biochemistry, and chemistry/business field major (BS) and chemistry/business field major (BA).

The degree requires Chem. 524, 532, 545, 546, and 547 and the necessary prerequisites, including Math. 344 and one year of physics (Phys. 313, 314, 315, and 316) or their equivalents. Students with a substantial interest in the biological sciences may satisfy the BA requirements by substituting Chem. 662 and 664, or Chem. 663, for Chem. 524 (then Chem. 523 is required) or by substituting Chem. 662 or 663 for Chem. 546. This degree requires foreign language (5 hours beyond 111-112 in one language or equivalent to 112 in two languages).

Students who meet the requirements of the BA program may be certified by the American Chemical Society if they also take Chem. 514, 524, 546, 613, and 615 and six hours of professional development courses. Students planning to become teachers of chemistry should complete the bachelor of arts program.

Biochemistry Field Major. The departmental requirements of biological sciences and chemistry participate jointly in this program. Students selecting this major should seek the advice of one of the departmental chairpersons as early as possible. The required courses are: Biol. 203Q, 204, 419, and 420; Chem. 111Q, 112Q, 523, 531, 532, 662, 663, and 664; Phys. 213Q and 214Q and Math. 112 (or 111 and 123). Also required are Chem. 666 and 669 (two enrollments), which are cross-listed in the Department of Biological Sciences, and 21 hours of biochemistry electives.

Chemistry/Business Field Major. The Charles M. Buss program in chemistry/business is designed for students who...
wish to pursue careers in chemical sales, management, advertising, and other related areas. This program requires 30 hours of business courses as follows: Accr. 210 and 220; Econ. 201Q and 202Q; B. Law 435; Fin. 340; Mgmt. 560; and Mkt. 300, 405, and 608. In addition, approximately 30 hours of chemistry and mathematics are required: Chem. 111Q, 112Q, 523, 561 or 662, 531, 532, and 603; and Math. 144 or 242Q.

Students selecting this option should contact the chairperson of the Department of Chemistry as early as possible for advice.

Minor. The chemistry minor consists of at least 14 hours of chemistry courses and must include at least four hours from Chem. 514, 523, 531, 533, 534, 545, and 546. Credit is not allowed for both Chem. 533/534 and Chem. 531. A 2.00 GPA in chemistry is required.

Advising. All students pursuing one of the above degree programs should consult closely with the Department of Chemistry in planning their program. Students should plan to begin required physical chemistry courses during their junior year (see below), thereby requiring that physics and calculus prerequisites be taken earlier. Students should consult advisors.

Minimum Requirements in Chemistry Programs

Bachelor of Science
Course
Chem. 111Q, 112Q...........................10
Chem. 505.................................1
Chem. 514.................................3
Chem. 531, 532.............................10
Chem. 523, 524.............................8
Chem. 545, 546.............................6
Chem. 547.................................3
Chem. 613.................................2
Chem. 615.................................2
Chem. 600-799*...........................3
Chem. 690.................................2
Phys. 313Q, 314Q, 315Q, 316Q......10
Math. 112, 242Q, 243, 344.........18
Professional elective...................4

*Part of the required seven hours of professional elective courses (see description above).

Typical Course Sequence
Freshman
First semester
Chem. 111Q, General Chemistry ............5
Math. 112, Precalculus Mathematics*........5
Engl. 101, College English I...............3
Comm. 111, Public Speaking..............13

*Not needed if two years of high school algebra, one year of high school geometry and one-half year of high school trigonometry taken.

Second semester
Chem. 112Q, General and Inorganic Chemistry........5
Math. 242Q, Calculus I..................5
Engl. 102, College English II............3
Hist. 131 or 132, History of the U.S. ...3

Sophomore
First semester
Chem. 531, Organic Chemistry*..............5
Math. 243, Calculus II..................5
Phys. 313Q, University Physics I..........4
Engl. 220Q, 230Q, 232, or other, English Literature........3

Second semester
Chem. 532, Organic Chemistry II...........5
Phys. 314Q, University Physics II..........4
Phys. 315Q, University Physics Lab I......1
Math. 344, Calculus III..................3

A general education introductory course in social sciences........3

Junior
First semester
Chem. 514, Inorganic Chemistry............3
Chem. 523, Analytical Chemistry...........6
Phys. 316Q, University Physics Lab II.....1

A general education introductory course in fine arts........3

A general education introductory course in a second social sciences department........14

Second semester
Chem. 545, Physical Chemistry*............3
Chem. 505, Chemical Literature............1
Chem. 524, Instrumental Methods of Chemical Analysis........4
Biol. 106, Human Organism...............3

A general education further studies or issues and perspectives course in history, English, or fine arts........3

Math. 344 is a prerequisite.

Senior
First semester
Chem. 546, Physical Chemistry............3
Chem. 547, Physical Chemistry Laboratory........2
Chemistry major electives..............3
Chem. 690, Independent Study and Research........2

A general education further studies or issues and perspectives course in social sciences........3

Electives.........................16-17

Second semester
Chem. 615, Advanced Inorganic Chemistry.........3
Chem. 613, Inorganic Chemistry Laboratory...........2
Chemistry major electives..............3

Electives.........................6

Bachelor of Arts
Course
Chem. 111Q, 112Q........................10
Chem. 531, 532...........................10
Chem. 523, 524**.........................8
Chem. 545, 546**.........................6
Chem. 547.................................2

Electives.........................10

Bachelor of Science in Chemical Science
Course
Chem. 111Q, 112Q........................10
Chem. 514.................................3
Chem. 523, 524...........................10
Chem. 531, 532...........................10
Chem. 662, 663...........................6
Chem. 500-800 (605 recommended)........6
Math. 144 or 242Q.......................18

Physics (one year)......................10

Biochemistry Field Major
Course
Chem. 111Q, 112Q........................10
Chem. 523.................................4
Chem. 531, 532...........................10
Chem. 662, 663...........................6
Chem. 664.................................3
Chem. (Biol.) 666........................3
Chem. (Biol.) 669........................4
Biol. 203Q, 204..........................10
Biol. 419.................................3
Biol. 420.................................4
Math. 112 or 111, 123....................5-6
Phys. 213Q, 214Q.........................10
Biochemistry electives................21

Chemistry/Business Field Major
Course
Chem. 111Q, 112Q........................10
Chem. 523.................................4
Chem. 531, 532...........................10
Chem. 561 or 662.........................3
Chem. 603.................................3
Math. 144 or 242Q.......................18
Acct. 210 and 220.......................6
Econ. 201Q and 202Q....................6
Mkt. 300, 405, 608......................9
Fin. 340.................................3
Lower-Division Courses

>101G. The Science of Chemistry. (3). General education introductory course. Teaches the basic concepts of chemistry that will aid in understanding the physical world. No attempt to teach basic computational or laboratory skills; instead emphasizes such concepts as atomic and molecular theory, energy, structures, and theories regarding why reactions occur.

>103Q. General Chemistry. (5). 3R; 4L. Lab fee. General education introductory course. A survey of inorganic, organic, nuclear, and biological chemistry. Recommended for the student who plans to take only one course in chemistry. Students who expect to major in the natural sciences should take the Chem. 111Q-112Q sequence. Prerequisite: one year of high school algebra or Math. Oll.

110. Preparatory Chemistry. (3). A general chemistry course for students who have not had adequate preparation in chemistry or physics. Enables students to improve their problem-solving skills and to briefly review mathematics relevant to general chemistry. Introduces the basic chemical concepts of atoms, molecules, chemical reactions, chemical equations, gas laws and solutions. Credit is allowed in only one of the following: Chem. 103Q, 110, or 111Q. Prerequisite: one and a half units of high school algebra or Math. Oll.

>111G. General Chemistry. (5). 3R; 4L. Lab fee. General education introductory course. An introduction to the general concepts of chemistry. Includes chemical stoichiometry, atomic and molecular structure, bonding, gas laws, states of matter, and chemical periodicity. Chem. 111Q-112Q meets the needs of students who may wish to take more than one course in chemistry. Credit is allowed in only one of the following: Chem. 111Q, 110, or 111Q. Prerequisites: either passing score on the departmental placement exam and Math. 1ll or equivalent with a grade of C or better, or concurrent enrollment in Math. 111 or Chem. 110 with C or better or concurrent enrollment in Math. 111.

>112Q. General and Inorganic Chemistry. (5). 3R; 4L. Lab fee. General education further studies course. Continuation of Chem. 111Q. Includes thermodynamics, gaseous and ionic equilibria, kinetics, nuclear chemistry, electrochemistry, qualitative analysis, and an introduction to theories of bonding. Prerequisite: Chem. 111Q with a grade of C or better.

>541. Cooperative Education in Chemistry. (1-4). Permits chemistry students to participate in the Cooperative Education program. Offered Cr/NC only.

Courses for Graduate/Undergraduate Credit

505. Chemical Literature. (1). A survey of chemical publications and the publication process. Gives the student the ability to conduct a proper search of the literature for chemical information. Also covers aspects of technical writing. Prerequisite: Chem. 351.

514. Inorganic Chemistry. (3). General education further studies course. Basic inorganic chemistry emphasizing molecular symmetry and structure, fundamental bonding concepts, ionic interactions, periodicity of the elements, systemsatics of the chemistry of the elements, acid-base chemistry and non-aqueous solvents, classical coordination chemistry and introductory bioinorganic chemistry. Prerequisite: Chem. 112Q with a grade of C or better.

523. Analytical Chemistry. (4). 2R; 6L. Lab fee. General education further studies course. Evaluation of data, theory and application of gravimetric analysis and precipitation, neutralization and oxidation-reduction volumetric analysis. Prerequisite: Chem. 112Q with a grade of C or better.

524. Instrumental Methods of Chemical Analysis. (4). 2R; 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.

531. Organic Chemistry. (3). 3R; 6L. Lab fee. General education further studies course. An introduction to the study of carbon compounds emphasizing reaction mechanisms, stereochemistry, and spectrographic analysis. Prerequisite: Chem. 112Q with a grade of C or better.


553. Elementarv Organic Chemistry. (3). General education further studies course. Basic organic chemistry emphasizing topics of importance to health professions and education majors. Special emphasis to carbohydrates, proteins, drugs, pesticides and energy production. Students should enroll in Chem. 553 only. Credit is not allowed for both Chem. 553-554 and 531. This course does not meet the needs of chemistry majors or premed students. Prerequisite: Chem. 112Q or equivalent.

534. Elementary Organic Chemistry Laboratory. (2). Lab fee. A basic laboratory course to provide pertinent experiences in the laboratory to fortify the survey lecture course Chem. 553. Prerequisite or corequisite: Chem. 553.

545. Physical Chemistry. (3). General education further studies course. Thermodynamics. Studies gases, first law, thermodynamics, second and third laws, phase equilibria, solutions, chemical equilibria, electrochemistry and surface chemistry. Prerequisites: Chem. 112Q, Math. 344 or its equivalent and one semester of college physics.

546. Physical Chemistry. (3). Kinetic theory, transport phenomena, quantum mechanics, spectroscopy and statistical thermodynamics. Prerequisites: one year of college physics and Math 344 or its equivalent.

547. Physical Chemistry Laboratory. (2). 6L. Lab fee. Physical chemistry experiments that illustrate principles learned in Chem. 545 and 546. Prerequisite: Chem. 545 or 546.

561. Introduction to Biochemistry. (3). General education further studies course. A brief history of biochemistry, emphasizing the development of molecular biology. Chemistry of biomolecules—proteins, carbohydrates, lipids, nucleic acids, and vitamins, molecular basis of bioenergetics and metabolism and storage, transfer and control of genetic information. Prerequisite: Correlation of these methods to the human health related programs and science education curricula. Prerequisite: Chem. 531 or 533 or one semester of organic chemistry.

602. Numerical Methods. (2). Application of numerical methods to problems in chemistry and physics. Roots of equations; curve fitting; interpolation, extrapolation, and smoothing of experimental data; numerical differentiation and integration; and computer programming. Prerequisite: instructor's consent.

603. Industrial Chemistry. (3). Bridges the industrial-academic gap. Includes petroleum chemistry and major processes in industrial inorganic chemistry. Also discusses some aspects of environmental chemistry such as hazardous and nuclear waste disposal and air pollution. Topics in polymer chemistry include major synthetic routes, major monomers and high performance resins, techniques of polymer characterization, structure property correlations and methodology in plastics and composites processing. Prerequisite: Chem. 532 or concurrent enrollment.

605. Medicinal Chemistry. (3). For students interested in chemistry related to the design, development and mode of action of drugs. The primary purpose of the course is to describe those organic substances that are used as medicinal agents and to explain the mode of action and chemical reactions of drugs in the body; to illustrate the importance and relevance of chemical reactions as a basis of pharmacological activity, drug toxicity, allergic reactions, carcinogenicity, etc.; and to bring 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 533 or equivalent; a semester of biochemistry (Chem. 561 or 662) and a year of biology are strongly recommended.

613. Inorganic Chemistry Laboratory. (2). 6L. Lab fee. Experimental methods of inorganic chemistry. Prerequisite: Chem. 514 or concurrent enrollment.
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 enzyme catalysis, mechanisms of inorganic reactions and solid state chemistry. Prerequisite: Chem. 514 and 546.

641. Advanced Physical Chemistry. (3). Introduction to quantum chemistry, atomic and molecular spectra, statistical thermodynamics and reaction rate theory. Prerequisite: Chem. 546.

642. Chemical Physics. (3). Topics in areas of overlapping interest for students of chemistry and physics, such as thermodynamics, kinetics, quantum mechanics, solids and various types of spectroscopy. A team of chemists and physicists discusses standard experimental and theoretical techniques used in research in chemical physics. Prerequisite: Chem. 641 or instructor's consent.

653. Biochemistry of Cell Metabolism, Biosynthesis, Structure, Function and Regulation of Proteins and Nucleic Acids. (3). Study of metabolism and control of carbohydrates, lipids, phosphoglycerides, sphyngolipids, steroids, amino acids and proteins, synthesis of purines, pyrimidines and nucleotides; synthesis and structure of DNAs, RNAs and proteins; organization and functioning of genes; evolution of proteins and nucleic acids; contemporary 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. Prerequisites: Chem. 523 and 532 or equivalent.

664. Biochemistry Laboratory. (3) 1R; 6L. Laboratory practice in biochemical procedures and literature searching; experiments include isolation, characterization and assay of biologic molecules 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.

666. Special Topics in Biochemistry. (3) (Offered spring semester in odd-numbered years.) Discusses a small number of current problems in biochemistry in depth. Requires reading of published research in the field. Prerequisites: Biol. 204 and Chem. 662 and 663.

669. Research in Biochemistry. (2). Cross-listed as Biol. 669. S/U grade only. Students in the biochemistry 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. 500 and Chem. 662 or 663 and 664.

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 three credits may be counted toward graduation. Prerequisite: departmental consent.

694. Environmental Science I. (4). (2R; 3L). Cross-listed as Biol. 702 and Geol. 702. Advanced theoretical and applied principles of the interdisciplinary study of environmental science. Includes environmental chemistry, environmental toxicology, aquatic chemistry, and phase interactions. The laboratory portion addresses local environmental problems from a risk assessment perspective. Biol. 702 and 703 (or equivalent) are required for all graduate students in the master's of environmental science program. Prerequisites: acceptance in the master's of environmental science program or instructor's consent.

697. Environmental Science II. (4). (2R; 3L). Cross-listed as Biol. 703 and Geol. 703. Advanced theoretical and applied principles of the interdisciplinary study of environmental science. Includes environmental chemical analysis, environmental toxicology, aquatic micro-biochemistry, environmental biochemistry, water treatment, photochemical smog, and hazardous waste chemistry. The laboratory portion addresses local environmental problems from a risk assessment perspective. Biol. 702 and 703 (or equivalent) are required for all graduate students in the master's of environmental science program. Prerequisite: acceptance in the master's of environmental science program or instructor's consent.

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 con-
824. Electroanalytical Chemistry. (3). Includes voltammetry, polarography, chromoanalyzer and coulometry; reversible and irreversible diffusion controlled processes; CE (chemical reaction before electrical reaction), EC (electrical reaction before chemical reaction) and catalytic reaction; and organic polarography and voltammetry. Prerequisite: Chem. 524 or equivalent.

831. Advanced Physical Organic Chemistry. (3). Includes molecular orbital theory, sigma and pi-bonding, resonance, cycloaditions, reactive intermediates and photochemistry. Prerequisite: Chem. 731.

832. Modern Synthetic Methods. (3). Discussion of retrosynthetic analysis, applications, organic syntheses and stereo-chemistry. Prerequisite: Chem. 524 or equivalent.

833. Natural Products Chemistry. (3). Discussion of the structure, chemistry and biosynthesis of the alkaloids, steroids, terpenoids, carbohydrates and aromatic and aliphatic natural products. Prerequisite: Chem. 732.

834. Heterocyclic Chemistry. (3). An account of the physical and chemical properties of the main classes of heterocyclic compounds. Prerequisite: Chem. 732.

835. Bioorganic Chemistry. (3). Includes the chemistry of amino acids and peptides, enzyme structure and function and inhibitor design. Prerequisites: Chem. 662, 663 and 732 or 662 and concurrent enrollment in 663 and 732.

841. Advanced Quantum Chemistry. (3). Considers advanced applications of quantum mechanics to atomic and molecular problems. Includes determinant wave-functions, angular momentum coupling, time-dependent perturbation theory, relativity considerations, tensor operators and molecular orbital calculations. Prerequisites: Chem. 705 and 741 or equivalents.

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. 546 or equivalent.

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. 546, 845 or equivalents.

845. Chemical Thermodynamics. (3). A presentation of the basic three laws of thermodynamics in a classical framework to increase understanding of the physical systems. Emphasizes theory and its application to chemical systems. Prerequisites: Chem. 545, 546 and Math. 344 or equivalents.

846. Molecular Spectroscopy. (3). The theoretical basis for spectroscopy and spectroscopic determinations of molecular structure. Includes polyelectronic atoms, time-dependent perturbation theory, vibration and rotation of diatomic molecules, vibration and rotation of polyatomic molecules, electronic spectra and magnetic resonance spectroscopy. Prerequisites: Chem. 741 or its equivalent and Chem. 705 or its equivalent.

847. Chemistry of Condensed Matter. (3). Includes thermodynamics, statistical mechanics, quantum chemistry and structural determinations of condensed phase matters. Emphasizes metals, alloys, intermetallic compounds, composite materials and advanced materials. Prerequisites: Chem. 741 and 745 or equivalents.

852. Techniques of Polymer Characterization. (3). A study of physical, spectroscopic and diffraction techniques to determine the size, structure and morphology of polymers.

853. Polymer Properties. (3). Kinetics and thermodynamics of the crystallization process and the influence of sample history on the gross mechanical properties of three classes of polymeric features which preclude the development of polymer crystals and encourage amorphous character, relationships between structure, Tm and Tg, theoretical strengths of materials, the time dependent mechanical behavior of polymers and the Maxwell and Voigt models of viscoelasticity. The 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.

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.

862. Biotechnology: Principles and Applications. (3). Presents a broad informed view of contemporary biotechnology, including its role in the production of premium products from biological raw materials. Biotechnology involves the production of products include energy, food, drink, flavors, chemicals, biopolymers, medicines and agricultural materials. Prerequisites: Biol. 203 and 204 and Chem. 662 or 663 or equivalents.

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, including sequencing and recombinant DNA procedures. Prerequisites: Biol. 203 and 204 and Chem. 662 or 663 or equivalents.

864. Nucleic Acids: Structure, Chemistry and Function. (3). A comprehensive examination of the chemistry and biology of deoxyribonucleic acid and their components. Studies reactivity and modification of nucleotides and polynucleotides for different chemicals and mutations. Reviews chemical synthesis of polynucleotides and sequence analysis of nucleic acids, including site-specific mutagenesis. Studies nucleic acid functions and information transfer in bio-
Chemical systems. Also studies major nucleases and discusses DNA-protein interactions.

890. Research in Chemistry. (2-12). S/U grade only. Research for the student planning to receive an MS. Research is directed by a faculty member. Repeatable for credit.

990. Research in Chemistry. (2-16). S/U 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

The Elliott School of Communication offers an integrated major in communication leading to the Bachelor of Arts (BA) degree. Students can develop a special (open) emphasis that respects their background and experience and is consistent with their educational and professional goals, or choose a structured emphasis in applied communication, broadcast journalism, electronic media, integrated marketing communications, or journalism.

This comprehensive communication degree has three distinguishing characteristics:

1. It is interdisciplinary in nature, reflecting the contemporary belief that all communication media are engaged in essentially the same functions (gathering information and creating and disseminating messages) and that the present-day communication professional must be schooled in the basic skills—writing, speaking, and visual communication—and must develop the ability to plan, organize, evaluate, and think strategically. Founded on the principle that communication specialists should also be communication generalists, this degree program combines disciplinary strengths in an inter-disciplinary matrix.

2. It is consistent with the mission of Wichita State University to offer programs that are responsive to the needs of the urban community that the University serves. The Kansas communication industry has its focus in Wichita, the major media center of the state.

3. Its location allows the program and its students to take full advantage of the communication opportunities afforded by the largest city in Kansas. The region of the state served by WSU includes one public and four commercial television stations, more than 15 radio stations, nine daily and 32 weekly newspapers, more than 25 advertising agencies, and a range of international, national, regional, and local industries, businesses, and public agencies, many with substantial communication operations. This setting allows students to combine academic and professional interests in a program that matches concept with example, education with experience.

Degree Requirements

Major. Students majoring in communication must maintain a 2.500 grade point average (overall and in the major), complete a minimum of 40 credit hours in communication, including 22 credit hours in the communication core, and submit a portfolio of their work during their senior year (see portfolio requirement below).

All students must take the communication core courses: Comm. 130Q, 301, 305, 325, 472, 535, and two courses from 430, 630, and 631. At least 18 credit hours must be in either a structured or an open emphasis area. Specific course requirements in the emphasis areas are listed below.

a. Applied Communication: Comm. 360; choose two courses from 302, 312Q, and 328Q (Interpersonal/Organizational Communication cluster), or choose two courses from 311, 313Q, and 632 (Rhetorical/Political Communication cluster); 640 or 650; and six hours of upper-division communication elective credit.

b. Broadcast Journalism: Comm. 401, 402, 622, one course from 304, 500, 522, 604, and 609; and six hours of upper-division communication elective credit.

c. Electronic Media: Comm. 303, 304, 332, 604, 609, and three hours of upper-division communication elective credit.

d. Integrated Marketing Communications: Comm. 324, 502, 510, 525, 626, and three hours of upper-division communication elective credit. Outside course requirements: Mkt. 300 and 405.

e. Print Journalism: Comm. 310, 401, 500, 510, one course from 340, 550, 571, 660; and three hours of upper-division communication elective credit.

f. Open Emphasis: Students can develop and propose an open emphasis more appropriate for their interests and needs than a structured emphasis area and which respects their backgrounds and experience. These proposals must be developed by students in consultation with a faculty advisor, be substantially different from the structured emphases available, and be coherent and justifiable to a faculty committee, which will review and act on these proposals at specified times during the academic year. Each student must submit for approval an Open Emphasis Plan of Study to the Undergraduate Admissions Committee of the Elliott School of Communication at the beginning of the student's junior year or upon completion of 18 credit hours in the major.

Minor. A minor in communication consists of two courses from the communication core plus at least 12 hours of electives in communication chosen with the approval of a faculty advisor (6 of the 12 hours must be at the 300-level or above).

Field Majors. Students seeking a field major may elect either an 18-hour concentration in communication (as the major area of study) or a 9-hour concentration in communication (as one of two allied departments taken in addition to the major area of study). The 18-hour concentration must include 9 hours of communication core courses and 9 hours of upper-division course work in communication. The 9-hour concentration in communication must include 6 hours of communication core courses and 6 hours of upper-division course work in communication. Some or all of the upper-division course work may be in the communication core courses.

Bachelor of General Studies. Students seeking a BGS degree may elect either a 15- to 21-hour concentration in communication (as the focal or primary concentration) or a 6- to 12-hour concentration (as one of two secondary concentrations taken in addition to the primary concentration). The 15- to 21-hour concentration must include 9 hours of communication core courses and 9 hours of upper-division course work in communication. The 6- to 12-hour concentration must include 6 hours of communication core courses and 6 hours of upper-division course work in communication. Some or all of the upper-division course work may be in the communication core courses.

Certificate in Applied Communication. This certificate program is designed for supervisors, managers, and other professionals who interact with employees and coworkers. The six courses (18 hours) offered in this program concentrate on applied communication, a key component of successful management. These are standard college classes offering practical tools for professionals. Many are offered in the evenings, on weekends, or in condensed formats. The certificate program requires successful completion of the following courses: Comm. 302, 312, 325, 328, 360, and 650. Comm. 111, Public Speak-
ing, or the equivalent is a prerequisite for the certificate program.

**Teaching Certifications.** The Elliott School of Communication offers secondary education teaching certifications (secondary field only) in two areas: speech communication and journalism. See the school's secondary education certification advisor for details.

### Admission Requirements

Students planning to pursue a major in communication must make formal application for admission to major status. To be admitted, applicants must be students in Fairmount College of Liberal Arts and Sciences; have an overall grade point average of 2.500 or better; pass a standardized departmental English Proficiency Test (the Grammar, Spelling, and Punctuation test, or GSP); and file an Application for Admission to Major Status form with the Elliott School of Communication. Additional information regarding the application process and procedures is available from the main office of the Elliott School.

### Advising Requirements

Students will be assigned a faculty advisor upon admission to major status and are strongly encouraged to meet with that advisor at least once a semester while they are enrolled. The undergraduate coordinator will advise all pre-majors in communication to help students understand and attempt to meet the requirements for admission to major status in communication (see Admission Requirements above). Students admitted to major status will be assigned a faculty advisor who will help them select their emphasis area or develop an open emphasis, which requires preparation of an undergraduate plan of study.

### Portfolio Requirement

Students majoring in communication must successfully complete Comm. 472, Senior Portfolio Seminar. The seminar will assist students to prepare a resume and portfolio that reflects their academic and professional work in communication, and which can be used in seeking employment or opportunities for further study upon graduation. The portfolio, which can include videotapes, interactive media, brochures, scholarly papers, and so on, will be reviewed by a three-member committee of communication faculty and professionals. Students should enroll in the seminar upon achieving senior status (i.e., finished 90 hours of course work) and after completing at least 18 hours of communication course work.

### Communication Core Courses

**130Q. Communication and Society.** (3). Introduces the functions, processes, and effects of individual and mass communication in American society. Explores economic, social, and governmental impacts of such communication. Includes a survey of the media and communication industry.

**301. Writing for the Mass Audience.** (3). Intro- duces the technique of writing for the mass audience, emphasizing approach necessitated by technology in dealing with print broadcast, advertising, and public relations. Prerequisites: Engl. 101, Engl. 102, and Comm. 130Q, with a grade of C or better in each, pass departmental English Proficiency Exam, and departmental consent.

**305. Visual Technologies.** (3). Examines the importance and meaning of visual symbols in modern society. Explores the methods by which visual images inform, educate, and persuade readers.

**325. Speaking in Business and the Professions.** (3). A study of the basic concepts of public speaking and discussions as they apply to the business and professional person. Emphasizes public presentations, group leadership, and interpersonal communication as appropriate to business and professional oral communications. Prerequisite: Comm. 111 with a grade of C or better.

**340. Communication Research and Inquiry.** (3). General education further studies course. Introduces the process of research and inquiry across the discipline of communication. Helps students in communication become more intelligent consumers of research and investigative inquiry, and to become more adept at designing their own research projects. Includes information gathering, structuring inquiry with qualitative and quantitative research designs, and processing and reporting information. Prerequisite: junior standing and Comm. 130Q or instructor's consent.

**472. Senior Portfolio Seminar.** (1). Students prepare a resume and portfolio of their best work to be evaluated by faculty members and communication professionals in their area of emphasis. Ideally completed in a student's final semester before graduation. Graded C/R. Prerequisites: Senior standing, completion of 18 hours of communication course work and departmental consent.

**355. Communication Analysis and Criticism.** (3). General education further studies course. Introduces the methods used for the analysis and critique of various linguistic, pictorial, and aural elements of communication for the purpose of becoming more discerning consumers of the various forms of public and mass-mediated messages. Analysis includes print advertisements, radio and television messages, newspaper features, and public speech- es. Prerequisites: junior standing and Comm. 1301 with a C or better or instructor's consent.

**630. Communication Law and Responsibility.** (3). General education issues and perspectives course. Emphasizes both oral and written aspects of communication law and responsibility. Addresses general functions of the law including the right to communicate, broadcast law and law of the press. Includes discussion of the first amendment rights, libel, privacy, copyright, advertising, obscenity, pornography, and corporate communication concerns.

**631. Historical and Theoretical Issues in Communication.** (3). General education further studies course. Examines the development of various issues in communication in historical context. Emphasizes different humanistic and scientific theories of communication and the historical development of mediated communication. Uses selected theories to generate critiques of specific communication events. Prerequisites: junior standing and Comm. 130G or instructor's consent.

### Lower-Division Courses

**011. Reducing Fear of Speaking.** (2). For students who feel an unwarranted degree of fear, nervousness, or stage fright when confronting situations calling for oral communication, especially but not exclusively, before groups of people. Goal is to reduce the fear of such situations through practice in supportive settings and other specific methods developed in the fields of counseling and speech communication that have been demonstrated effective in reducing communication anxiety.

**011. Public Speaking.** (3). General education basic skills course. Studies basic concepts of speech communication as applied to public speaking. For students wishing to enhance leadership potential by improvement in traditional public speaking situations. (The University's requirement in oral communication must be fulfilled by completion of Comm. 111. For especially qualified students, an exemption or advanced standing examination is available. For further information, contact the Elliott School of Communication.)

**150. Debate Workshop.** (2). Instruction in theory and techniques of debate and preparation for debating the national high school debate topic. Not repeatable for credit. Prerequisite: departmental consent.

**190G. Introduction to Human Communication.** (3). General education introductory course. Explores several alternative frameworks by which humans cope with and control the communication environment. Use observational and experimental methods to discover the variety of patterns used by humans to symbolically interact with themselves, each other, and entire cultures. Utilizes multimedia instructional procedures.

**202. Debate and Forensics.** (2). Research and preparation for debate and individual speaking events, participation in intercollegiate debate and/or forensics competition, and debate and forensics squad meetings. Repeatable for a maximum of four hours credit. May
not be counted toward a major. Prerequisite: departmental consent.

22Q. Introduction to Film Studies. (3). Emphasizes the nature and function of film as a mode of communication with attention to film theory and technical criticism. Selected films are shown in class.

221Q. Oral Interpretation. (3). General education further studies course. Cross-listed as Thea. 221Q. Develops the mental, vocal and analytical techniques essential to the oral interpretation of literature.

222. Improving Voice and Diction. (3). Cross-listed as Thea. 222. For students wishing to improve their speaking voices and gain greater control over their pronunciation of spoken English. Course is performance oriented; however, the anatomy of the vocal mechanism and the International Phonetic Alphabet are studied for practical application in the improvement of voice and diction.

290. Listening Strategies. (3). Provides students with an understanding of the process of listening in a variety of communication settings. Aids students in improving listening in the classroom, interpersonally, and professionally. Examines listening myths and barriers to effective listening, encourages growth in positive listening attitudes and behaviors. Prepares students for professional as well as personal lives in which they will spend more time listening than any other type of communication. Prerequisite: Comm. 111 or departmental consent.

Upper-Division Courses

302. Interpersonal Communication. (3). General education further studies course. Develops an awareness of the elements of interpersonal communication and aids the student in establishing more meaningful and effective interpersonal relationships, both personally and professionally.

303. Audio Production. (3). Production and direction of audio programs. Hands-on use of all standard audio production equipment to learn techniques of sound blending and reproduction.

304. Studio Video Production. (3). 2R; 2L. Basic principles, procedures, and techniques of video production, including operation of studio equipment and direction of television programs and other video productions. Prerequisite: Comm. 303 or instructor's consent.

310. Introductory Photojournalism. (3). 2R; 3L. Lab fee. Basic photographic theory and technique emphasizing aspects of importance to journalists, writers, and editors. Students take, develop, and prepare pictures for publication. The department provides a limited number of cameras. Prerequisite: Comm. 301.

311. Persuasion. (3). General education further studies course. Explores the history, development, and manifestation of persuasive techniques through the study and/or creation of persuasive messages in speeches, mass media, advertising, politics, and organizations. The student becomes a better user and critic of persuasive messages and strategies. Prerequisite: Comm. 111.

312Q. Nonverbal Communication. (3). General education further studies course. A study of theory and research in nonverbal communication. Students explore different aspects of nonverbal communication and engage in original research and study in the field of nonverbal communication. Emphasizes the application of nonverbal communication to the total human communication process. Prerequisite: Comm. 111.

313Q. Argumentation and Advocacy. (3). General education further studies course. Studies the principles of effective rational discourse, oral and written, dealing with controversial issues in public deliberative, forensic, and educational areas. Includes valid and fallacious reasoning as well as tests of evidence.

324. Introduction to Integrated Marketing Communications. (3). Introduces the theory and practice of the integrated fields of advertising and public relations viewed from the perspective of integrated marketing communications. Includes audience research, the creation of specialized messages, and message delivery systems. Prerequisite: Comm. 301 or departmental consent.

328Q. Teamwork, Leadership, and Group Communication. (3). Studies the nature and functions of groups and the development of skills for identifying and evaluating communication behavior in small group situations emphasizing the dynamics of teamwork and group leadership.

332. Writing for Electronic Media. (3). Writing formats, commercials, continuity, and drama for the electronic media, including audio and video programs and productions. Prerequisite: Comm. 301 with a C or better or instructor's consent.

340. Applied Photojournalism. (3). 3R; 3L. Lab fee. Covering photographic assignments for the campus newspaper and other publications, under the overall supervision of a journalism instructor. Prerequisite: Comm. 301.

349. Hostage and Crisis Negotiations. (3). An introductory course focusing upon the study of negotiation management and techniques appropriate to the handling of hostage negotiations, barricaded subject negotiations and other exigent situations such as suicide and violent domestic disturbances. Examines the use and training of special tactical and negotiation teams. Prerequisites: CJ 191Q and Comm. 302 or equivalent or instructor's consent.

360. Applied Communication Strategies. (3). Surveys communication strategies as applied in interpersonal, organizational and rhetorical/political settings. Examines the connection between communication and technology, explores strategies for communication criticism, and identifies communication strategies relevant to issues such as human relations, ethical decision making, leadership, and political rhetoric. Prerequisite: Comm. 100Q or instructor's consent.

401. Beat Reporting. (3). Reporting and writing about events in the community. Stories assigned and handled under the instructor's direction may be used in various publications. Prerequisite: Comm. 301 with a C or better.

402. Debate and Forensics. (2). Research and preparation for debate and individual speaking events, participation in intercollegiate debate and/or forensics competition, and debate and forensics squad meetings. Repeatable for a maximum of four hours credit. May not be counted toward a major. Prerequisite: departmental consent.

422. Broadcast News. (3). Theory and techniques of preparing news for the electronic media, including preparation of newscasts and news reports for radio and television. Prerequisite: Comm. 401 or instructor's consent.

440. Advanced Photojournalism. (3). 3R; 3L. Lab fee. Advanced photographic theory and technique emphasizing the feature page photo essay, advertising photography for daily news publications, and the photojournalist's personal viewpoints and philosophies. Using their own camera equipment and the department's laboratory facilities, students shoot, process, and print photographs for publications. Prerequisite: Comm. 310.

481. Cooperative Education. (0-6). Credit for cooperative field placement that 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 and approved by appropriate faculty sponsors. May be repeated, but limited to a total of four credits in Comm. 481 and Comm. 690. Graded Cr/NCr. Prerequisite: departmental consent.

Courses for Graduate/Undergraduate Credit

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 and includes the study and practice of journalistic interviewing. Prerequisites: junior standing, Comm. 301 with a C or better and either 401 or 422.

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 in this course are valuable in writing grant proposals, committee reports, pamphlets and journal articles. Prerequisite: Comm. 301 with a grade of C or better, junior standing or departmental consent.

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 grade of C or better.

522. Advanced Broadcast News. (3). 3R; 3L. Advanced techniques of preparing news for radio and television presentation emphasizing actual work in radio and television newsrooms. Lab periods arranged with instructor. Prerequisite: Comm. 422.

525. Advertising Copywriting. (3). Detailed practice at writing various kinds of advertising copy, including print and broadcast forms.
Emphasizes tense, precise writing that evokes response sought by advertiser. Prerequisite: Comm. 324 and Comm. 301 with a grade of C or better or departmental consent.

526. Media Buying and Selling. (3). Principles, methods, and strategies of buying and selling media for advertising, including such topics as 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.

562. Studio B: Practicum in Broadcast Journalism. (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.

526. 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 campaigns materials. Prerequisite: Comm. 324 or instructor's consent.

532. American Public Address. (3). General education further studies course. A detailed study of notable American speakers and their public utterances. Their impact on the political, economic and social history of this nation from colonial time to the present is assessed.

565. Leadership Techniques for Women. (3). Cross-listed as Wom. S. 635. Provides the woman student experience in decision making and improves skills in leadership through role playing and exercise in group dynamics.

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.

650. Communication Training and Development. (3). An examination of communication concepts, processes, technologies and strategies related to training and development. Course includes the application of these elements to formal instruction across disciplines and at various educational levels as well as in most professional training settings.

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.

661. Directing the Forensics Program. (3). A study of the methods and procedures in coaching and directing the high school and collegiate forensics programs (debate and individual events). The future teacher is made aware of the literature and professional organizations in the field.

675. Directed Study. (2-4). Cross-listed as Thea. 675. Individual study or projects. Repeatable for credit with departmental consent. Prerequisite: departmental consent.

690. Communication Internship. (1-2). 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. A total of four credits in Comm. 690 and Comm. 481. Graded Cr/NCr. Prerequisite: departmental consent.

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.

715. International Communication Systems. (3). A comparative study of communication systems around the world, including print media, broadcasting, and new technologies. Examines the relationship between communication systems and the different social, cultural, and political contexts in which they exist, and explores some of the international conflicts that have arisen from these differences. Prerequisite: senior standing.

720Q. 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.

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. Prerequisite: Comm. 302 and junior standing or departmental consent.

750. Workshops in Communication. (1-4).

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

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 mass media. 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. Course should be taken at the beginning of the graduate program.

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.

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 communi-
Students may earn either the Bachelor of Science (BS) or the Bachelor of Arts (BA) degree in computer science. Both degrees provide in-depth preparation for professional work in business, industry, or government. The BS degree also provides a good preparation for graduate study in computer science or related areas.

Major: Bachelor of Science (BS)

1. Computer Science: The following computer science courses are required: 210, 211, 300, 312, 320, 410, 440, 510, 540, and 560.

In addition, students must complete 15 hours of advanced electives in computer science. These 15 hours of associated course work give students depth and breadth of knowledge, beyond what they receive in the required courses, by exposing them to advanced courses in some of the major areas in computer science. The advanced courses are in seven areas—artificial intelligence, software engineering, theoretical computer science, computer systems, computer hardware, information systems, and scientific, numeric and symbolic computation.

The student must complete 15 hours of course work in three or four areas. All advanced electives must be approved by the departmental academic advisor.

Minor

Students are required to complete a minimum of 16 hours of computer science courses. The following courses are required: 210, 211, 300, 312, 320, 410, 440, 510, 540, and 560.

In addition, students must complete 15 hours of sequence electives. These courses may be in information systems, software engineering, systems analysis, or some application area such as accounting or business administration. Other choices also are available. All sequence electives must be approved by the departmental academic advisor.

Information Technology Certificate

The computer science department also offers a certificate in information technology. This program consists of a minimum of 22 hours. Required courses are CS 103, Math 111 or a more advanced math course, Engl. 101, CS 211, CS 497C, and 6 hours of computer science electives chosen in consultation with the departmental academic advisor.

Example Schedule for BS in Computer Science

Freshman Year

Engl. 101, College English I ................................ 3
Math. 242, Calculus I ....................................... 5
Natural Science Introductory Course (biology) .............. 4
Comm. 111, Public Speaking .................................. 3

Second Semester

Engl. 102, College English II .................................. 3
CS 210, Introduction to Computer Science .................... 4
CS 211, Problem Solving and Programming in C ............ 4
Math. 243, Calculus II ......................................... 5

Sophomore Year

CS 300, Data Structures and Algorithms I ..................... 4
CS 320, Discrete Structures in Computer Science .......... 4
Math. 344, Calculus III, or Math. 511, Linear Algebra ...... 3
Fine Arts Introductory Course ................................ 3
Humanities/Social Sciences Introductory Course in American Government (Hist. 131Q or 132Q or Pol. Sci. 121Q) ............ 3

Second Semester

CS 312, Assembly Language and Systems Programming .... 3
CS 410, Programming Paradigms ................................ 3
Stat. 460, Elementary Probability and Mathematical Statistics ...... 3
<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural Science Introductory Course (non-biology)</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td></td>
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<tr>
<td><strong>Junior Year</strong></td>
<td></td>
</tr>
<tr>
<td>CS 440, Computer Organization and Hardware</td>
<td>4</td>
</tr>
<tr>
<td>CS 510, Programming Language Concepts</td>
<td>3</td>
</tr>
<tr>
<td>Humanities Introductory Course (philosophy)</td>
<td>3</td>
</tr>
<tr>
<td>Natural Science Further Study or Issues and Perspectives Course</td>
<td>3</td>
</tr>
<tr>
<td>Social and Behavioral Sciences Introductory Course</td>
<td>3</td>
</tr>
<tr>
<td><strong>Second Semester</strong></td>
<td></td>
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<tr>
<td>CS 105, Introduction to Computers and their Applications</td>
<td>3</td>
</tr>
<tr>
<td>CS 300, Data Structures and Algorithms I</td>
<td>4</td>
</tr>
<tr>
<td>CS 320, Discrete Structures in Computer Science</td>
<td>4</td>
</tr>
<tr>
<td>Math. 144, Business Calculus</td>
<td>3</td>
</tr>
<tr>
<td>Foreign language</td>
<td>5</td>
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<tr>
<td><strong>Sophomore Year</strong></td>
<td></td>
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<tr>
<td>CS 440, Computer Organization and Architecture</td>
<td>4</td>
</tr>
<tr>
<td>Social and Behavioral Sciences Introductory Course (sociology)</td>
<td>3</td>
</tr>
<tr>
<td>Phil. 354, Ethics in Computers</td>
<td>3</td>
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<tr>
<td>Elective</td>
<td>3</td>
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<tr>
<td><strong>Senior Year</strong></td>
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<tr>
<td>Advanced CS elective</td>
<td>3</td>
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<tr>
<td>Advanced CS elective</td>
<td>3</td>
</tr>
<tr>
<td>Humanities Introductory Course (literature)</td>
<td>3</td>
</tr>
<tr>
<td>Social and Behavioral Sciences Further Study or Issues and Perspectives Course (sociology)</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
</tr>
<tr>
<td><strong>Second Semester</strong></td>
<td></td>
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<tr>
<td>CS 510, Programming Language Concepts</td>
<td>3</td>
</tr>
<tr>
<td>Concepts</td>
<td>3</td>
</tr>
<tr>
<td>Computer science sequence elective</td>
<td>3</td>
</tr>
<tr>
<td>Natural Science Introductory Course (physical)</td>
<td>5</td>
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<tr>
<td>Social and Behavioral Sciences Further Study or Issues and Perspectives Course (sociology)</td>
<td>3</td>
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<tr>
<td>Humanities Introductory Course (philosophy)</td>
<td>3</td>
</tr>
<tr>
<td><strong>Junior Year</strong></td>
<td></td>
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<tr>
<td>CS 410, Programming Paradigms</td>
<td>3</td>
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<td>CS 440, Computer Organization and Architecture</td>
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<tr>
<td>Social and Behavioral Sciences Introductory Course (sociology)</td>
<td>3</td>
</tr>
<tr>
<td>Fine Arts Introductory Course</td>
<td>3</td>
</tr>
<tr>
<td>Humanities Introductory Course (literature)</td>
<td>3</td>
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<tr>
<td><strong>Second Semester</strong></td>
<td></td>
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<tr>
<td>CS 510, Programming Language Concepts</td>
<td>3</td>
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<tr>
<td>Concepts</td>
<td>3</td>
</tr>
<tr>
<td>Computer science sequence elective</td>
<td>3</td>
</tr>
<tr>
<td>Natural Science Introductory Course (physical)</td>
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<tr>
<td>Humanities Introductory Course (philosophy)</td>
<td>3</td>
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<tr>
<td><strong>Senior Year</strong></td>
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<tr>
<td>CS sequence elective</td>
<td>3</td>
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<tr>
<td>Humanities Introductory Course (philosophy)</td>
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<tr>
<td><strong>Example Schedule for BA in Computer Science</strong></td>
<td></td>
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<tr>
<td>Freshman Year</td>
<td></td>
</tr>
<tr>
<td>Eng. 101, College English I</td>
<td>3</td>
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<tr>
<td>Math. 111, College Algebra</td>
<td>3</td>
</tr>
<tr>
<td>CS 105, Introduction to Computers and their Applications</td>
<td>3</td>
</tr>
<tr>
<td>Comm. 111, Public Speaking</td>
<td>3</td>
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<tr>
<td>Humanities/Social Sciences Introductory Course in American Government (Hist. 131Q or 132Q or Pol. Sci. 121Q)</td>
<td>3</td>
</tr>
<tr>
<td><strong>Second Semester</strong></td>
<td></td>
</tr>
<tr>
<td>Eng. 102, College English II</td>
<td>3</td>
</tr>
<tr>
<td>CS 210, Introduction to Computer Science</td>
<td>4</td>
</tr>
<tr>
<td>CS 211, Problem Solving and Programming in C</td>
<td>4</td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
</tr>
<tr>
<td><strong>Programming Courses: No credit toward BS Degree in Computer Science</strong></td>
<td></td>
</tr>
<tr>
<td>201. FORTRAN Programming (3). 2R; 2L. Fundamentals of computer programming in FORTRAN and their application to problems. No credit toward the BS in Computer Science. Prerequisites: Engl. 101 and Math. 111 or 112, or equivalents, with grade of C or better; or departmental consent.</td>
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<tr>
<td>202. COBOL Programming (3). 2R; 2L. Fundamentals of computer programming in COBOL and their application to problems. No credit toward the BS in Computer Science. Prerequisites: Engl. 101 and Math. 111 or 112, or equivalents, with grade of C or better; or departmental consent.</td>
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<tr>
<td>203. BASIC Programming (3). 2R; 2L. Fundamentals of computer programming in BASIC and their application to problems. No credit toward the BS in Computer Science. Prerequisites: Engl. 101 and Math. 111 or 112, or equivalents, with grade of C or better; or departmental consent.</td>
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<tr>
<td>204. C Programming (3). 2R; 2L. Fundamentals of computer programming in C and their application to problems. No credit toward the BS in Computer Science. Prerequisites: Engl. 101 and Math. 111 or 112, or equivalents, with grade of C or better; or departmental consent.</td>
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<tr>
<td>205. C++ Programming (3). 2R; 2L. Fundamentals of object-oriented programming in C++ with applications to problems. No credit toward the BS in Computer Science. Prerequisites: CS 207 or 211 with a grade of C or better or departmental consent.</td>
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<tr>
<td><strong>Lower-Division Courses</strong></td>
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<tr>
<td>&gt;105. An Introduction to Computers and their Applications (3). 2R; 3L. General education introductory course. A computer literacy course introduces students to the Internet and other networks, multimedia, CD ROM, historical development of the computer; uses of the computer in business, industry, government, education, and the home; hardware components of a computer system; data representation; systems analysis and design; issues of ethics posed by technology, and future trends for computers. The laboratory section includes hands-on experience with the Internet, Windows, and microcomputer applications packages such as word processors, spreadsheets, etc. No credit granted toward the BS in Computer Science. Prerequisites: some familiarity with typewriter keyboard and minimal typing skills.</td>
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<tr>
<td>150. Workshop (1-5). Short-term courses focusing on new computer techniques. Repeatable for credit. Prerequisite: departmental consent.</td>
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<tr>
<td>&gt;210. Introduction to Computer Science (4). 3R; 2L. General education introductory course. Breadth introduction to the discipline of computer science. Covers algorithms, computer hardware, operating systems, introduction to high-level language programming, databases, artifi-</td>
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</table>
cial intelligence and other applications, and social issues. Prerequisites: Eng. 101, Math. 111, 112 or equivalent with a grade of C or better in each.

211. Problem Solving and Programming in C. (4). 2R; 2L. First course in programming in a high-level language. Emphasizes analyzing problems, designing solutions and expressing them in the form of a well-structured program in the high-level language C. Prerequisites: Eng. 101, Math. 111, 112 or equivalents with a grade of C or better in each.

Upper-Division Courses

> 300. Data Structures and Algorithms I. (4). 3R; 2L. General education further studies course. Basic data structures and associated algorithms. Includes stacks, queues, linked lists, trees, and graphs. Analyzes algorithms for efficiency and correctness. Prerequisites: CS 210 and 211, each with a grade of C or better.

312. Assembly Language and Systems Programming. (3). 3R; 1L. Fundamentals of assembly language programming. Includes assembler, text editor, arithmetic, machine instructions, macros, code view debugger, and memory segments. Programming assignments reinforce textbook knowledge. Prerequisites: CS 210 and 211, each with a grade of C or better.

320. Discrete Structures in Computer Science. (4). Deals with discrete structures relevant to computer science, including propositional and predicate logic, proof techniques, recursion, induction, and analysis of algorithms; sets and combinatorics: counting principles, permutations and combinations, the binomial theorem; partially ordered relations, equivalence relations; functions: one-to-one onto functions; matrices; graphs and trees; elementary graph algorithms, finite automate and regular languages; context free grammars and languages. Prerequisites: CS 210 and 211, each with a grade of C or better.

350. Workshop. (1-5). Short-term courses with special computer science emphases. Repeatable for credit. Prerequisite: departmental consent.

365. Introduction to Computer Graphics. (3). 2R; 2L. Introduces interactive computer graphics, presenting the basic concepts of the field. Includes geometry of computer graphics, graphics primitives, two- and three-dimensional representation, transformation, data structures, windowing and clipping, hidden lines, and surfaces and shading. Extensive use of computers provides practical experience. Prerequisite: CS 300.

410. Programming Paradigms. (3). 3R; 1L. Exposure to computer programming in various styles of languages. Emphasizes programming rather than theory. Prerequisites CS 300 and 320 with a grade of C or better in each.

440. Computer Organization and Architecture. (4). 3R; 2L. A study of basic computer hardware, organization, and architecture. Includes number representation, arithmetic, binary logic, circuit design, communication between major computer components, instruction processing cycle, system design, addressing techniques and the concepts of microprogramming. Hardware laboratory demonstrates the concepts. Prerequisites: CS 300 and 312 with a grade of C or better in each.

481. Cooperative Education in Computer Science. (1-3). Provides a field placement that 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 and approved by appropriate faculty sponsors. Prerequisite: department consent. Offered Cr/NCr only.

497. Special Topics. (1-3). Special topics of current interest in computer science. Prerequisite: departmental consent.

498. Individual Projects. (2-3). Repeatable for a total of six hours of credit. Graded S/U only. Prerequisite: departmental consent.

Courses for Graduate/Undergraduate Credit

501. Numerical Programming Techniques. (3). 2R; 2L. A study of the programming techniques used to solve nonlinear equations, interpolate, integrate and solve systems of linear equations. Discusses the implications of finite precision floating point arithmetic. Also covers techniques for initial and boundary value problems in ordinary differential equations. Selected algorithms are implemented on the computer. Prerequisites: Math. 243 and CS 300 with grades of C or better.

510. Programming Language Concepts. (3). Theoretical concepts in the design and use of programming languages, including scope of declarations, storage allocation, subroutines, modules, formal methods for the description of syntax and semantics. Introduction to the concepts of different styles of languages—impersonative languages, functional languages, logic languages, object-oriented languages, etc. Prerequisite: CS 410 with a grade of C or better.

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. Prerequisite: CS 440 with a grade of C or better.

560. Data Structures and Algorithms II. (3). 3R; 1L. Design and analysis of algorithms. Techniques for 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 320, and Math 344 or 531, and Stat. 460 with a grade of C or better in each.

612. Systems Programming. (3). 2R; 2L. A study of system software including assemblers, disassemblers, macroprocessors, link editors, loaders, language translators and debuggers. Practical experience in building system software through programming laboratory exercises. Prerequisite: CS 300 and 312 with a grade of C or better.

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 analysis, 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 or equivalent with a grade of C or better.

632. Symbolic Computation with LISP. (3). An in-depth study of LISP as a functional programming language with its application to artificial intelligence, polynomial computation and theorem proving. Complete substantial programming projects in LISP. Prerequisites: Math. 243 with a grade of C or better; and CS 300 and 320 with grade of B or better in each; or CS 410 or CS 560 with a grade of C or better; or departmental consent.

665. Introduction to Database Systems. (3). Fundamental aspects of database systems, including conceptual database design, entity-relationship modeling, and object-oriented modeling. The relational data model and its foundations, relational languages, and SQL (Structured Query Language), logical database design, dependency theory, and normal forms; physical database design, file structures, indices, and decomposition; integrity, security, concurrency control, recovery techniques, and optimization of relational queries. Prerequisite: CS 300 and 320 with a grade of C or better.

674. Artificial Intelligence and Philosophy. (3). Cross-listed as Phil. 674. Transfer of ideas between artificial intelligence and philosophy: concepts and techniques of artificial intelligence and their application in philosophy (search, heuristic, problem solving, knowledge representation, learning, discovering); sources of insight for artificial intelligence in different branches of philosophy. The analogy between minds and computers "cognition is a computation and the mind is a computer" is contrasted with "there are mental features not accessible to computation." Discusses the relevance of Godel's theorem and of other results in the domain of computability. Prerequisites: at least one 300-level course in computer science or philosophy; Math. 243; five hours toward the major in any of the physical or biological sciences, or departmental consent. A grade of C or better must be earned in each prerequisite.

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 500 and 410, each with a grade of C or better.

864. Applications Systems Analysis. (3). A study of the methods for analyzing business systems problems and other large-scale applications of computer technology, management science and human relations. Systems analysis is the keystone of the education of the well-trained computer applications analyst. Includes system design, cost benefit analysis, data base design, distributed processing, project management and documentation. Prerequisite: CS 300 with a grade of C or better.

690. Information Systems Engineering. (3). Study of information systems design techniques, issues of systems evolution, project management, engineering design, various views of information systems and software and formal design approaches. Covers structured analysis and design approach, object-oriented approach, software design, database design, rule modeling, user interface design, performance evaluation issues relative to software design, systems evolution aspects from a software maintenance perspective, project management techniques and information systems engineering. Prerequisite: CS 300 with a grade of C or better.

697. Selected Topics. (1-3). Selected topics of current interest. Repeatable for credit with departmental consent. Prerequisite: departmental consent.

720. Theoretical Foundations of Computer Science. (3). Provides an advanced level introduction to the theoretical bases of computer science. Computer science theory includes the various models of finite state machines, both deterministic and nondeterministic, and concepts of decidability, computability and formal language theory. Prerequisite: CS 420 or equivalent with a grade of C or better or graduate standing.

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 grade of C or better or departmental consent.

750. Workshop in Computer Science. (1-5). Short-term courses with special focus on introducing computer science concepts. Repeatable for credit. Prerequisite: departmental consent.

771. Artificial Intelligence. (3). 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. Prerequisite: CS 300.

776. Expert Systems. (3). Planning, construction and application of expert systems. Discusses major aspects of expert systems; illustrates with various examples, including data representation, knowledge bases, inference engines, user interfaces, explanatory facilities, metarules and dealing with uncertainty. Introduces basics of a production system language. Prerequisite: CS 410 with a grade of C or better or instructor's consent.

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 Cr/NPr only. Prerequisites: departmental consent and graduate GPA of 3.0 or above.

798. Individual Projects. (1-3). Allows beginning graduate students and mature undergraduates to pursue individual projects of current interest in computer science. Graded S/UC only. Prerequisite: departmental consent.

Courses for Graduate Students Only

No computer science graduate students will be admitted to 800-level courses until they have completed CS 720.


821. Analysis of Algorithms. (3). Deals with advanced topics in the design and analysis of algorithms, including sorting networks, algorithms for parallel computers, Strassen's algorithm for matrix multiplication, polynomial multiplication and the Fast Fourier transform, number theoretic algorithms (gcd computation), and hard problems and approximation algorithms. Prerequisite: CS 560 with a grade of B or better; 720 is recommended.

822. Parallel Algorithms. (3). Deals with the design and analysis of parallel algorithms for various combinatorial problems in the Parallel Random Access Machine (PRAM) model. Covers models of parallel computation, the PRAM model, basic techniques for designing parallel algorithms, algorithms on lists and trees, and algorithms for selection, merging, sorting, searching as well as algorithms for graph problems. Prerequisite: CS 560 with a grade of B or better.

841. Advanced Computer Architecture. (3). A study of advanced topics in computer architecture like parallel processing, distributed architectures, computer performance evaluation and reliability of computing systems. Studies architectures of typical systems belonging to the IBM, CDC and Burroughs families of computers. Prerequisite: CS 540.


843. Distributed Computing Systems. (3). A study of software and hardware features of online multiple computer systems emphasizing network design and telecommunications. Includes distributed data bases, interprocessor communication and centralization versus distribution. Also includes study of the use of microcomputers in representative configurations. Prerequisite: CS 540 or 641 or CEE 694.

862. Advanced Database Systems. (3). Covers recent developments and advances in database technology. 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 560.

872. Machine Learning and Discovery. (3). An advanced study of computer programs that learn, improve performance and make discoveries. Includes objectives, methods and research paradigms for such systems, a survey of existing methods and applications, including the most recent developments; theoretical principles for learning and discovery systems; computational theories of learning processes and cognitive models of human learning; concept and theory formation, and use of analogy in learning. Includes participation in a group project such as developing a computer learning system. Prerequisites: CS 771 or 776 or 214 and 574, or CS 214 and 773.

873. Computer Vision. (3). An introduction to computer vision, a rapidly growing subfield of artificial intelligence. The basic topic is the understanding or description of images by a computer or robot. Covers two-dimensional Fourier analysis, scene matching and understanding, texture, motion, shape recognition, relational image structure and human perception. Prerequisite: CS 773 or instructor's consent.

874. Simulation and Modeling. (3). An up-to-date treatment of important aspects of simulation modeling, including data collection, input and output data analysis, modeling principles, simulation with general-purpose programming languages and special-purpose simula-
tion languages. Emphasizes theory, design, and implementation of modeling languages. Prerequisites: CS 360 and Stat. 460 with a grade of C or better in each; or instructor's consent.

881. Software Specification and Design. (3). A detailed presentation of the techniques and tools available for the specification of software requirements and their translation into a design. Includes formal specification and design methods such as structured analysis, object-oriented design and JSD. Prerequisite: CS 680.


886. Software Project Management. (3). Presents the knowledge, techniques and tools necessary to manage the development of software products. Topics include the phases and activities involved in building a project, the skills and tools required for estimating and scheduling and the responsibilities of the individuals involved. Prerequisite: CS 680.

889. Topics in Software Engineering. (3). An in-depth study of one or more topics in software engineering, such as Configuration Management, Quality Assurance, Formal Specifications, or Real-time Software Development. Actual topics vary with instructor's area of expertise. May be repeated for credit with different topics, but topics taken under previous course numbers may not be repeated. Prerequisite: CS 680.

890. Graduate Seminar. (2). A series of seminars on topics of current research interest in computer science. Participants are required to present at least one seminar on topic(s) to be selected with the approval of their graduate advisors. Repeatable up to four credit hours. Graded S/U only. Prerequisite: departmental consent.

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 and 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.

892. Thesis. (1-6). May be repeated for up to six hours of credit. Graded S/U only. Prerequisite: departmental consent.

893. Individual Reading. (1-5). Graded S/U only. Prerequisite: departmental consent.

898. Special Topics. (2-3). Topics of current interest to advanced students of computer science. Repeatable for credit with departmental consent. Prerequisite: departmental consent.

Criminal Justice

See Urban and Public Affairs, Hugo Wall School of.

Economics

The economics major in Fairmount College of Liberal Arts and Sciences provides excellent preparation for law school, for additional academic study in economics, business, and other fields, and for careers in public service. The study of economics is useful in helping students develop both their skills in critical thinking and their abilities to use analytical tools to solve complex problems. It is a major that lays a foundation for many career paths.

Major. The economics major in Fairmount College of Liberal Arts and Sciences requires a minimum of 31 hours and a maximum of 41 hours in economics. Math. 144 or Math. 242Q is required. Students who plan to major in economics should consult with the undergraduate advisor in the Department of Economics in Clinton Hall. Students in this major or minor must achieve a minimum 2.250 GPA. The following courses are required:

Course Hrs
Math. 144, Business Calculus or Math. 242Q, Calculus I.................3
Econ. 201Q and 202Q, Principles of Economics I and II.............6
Econ. 231, Introductory Business Statistics........................4
Econ. 301, Intermediate Macroeconomics.........................3
Econ. 302, Intermediate Microeconomics.........................3
Econ. 340, Money and Banking..................................3
Upper-division electives........................................12
Econ. 201Q and 202Q may be taken as part of the Fairmount College requirements.

Minor. A minor in economics is available to any student whose major field or area of emphasis is outside of economics. A minor consists of 15 hours exclusive of Econ. 101Q, 102Q, and 231. Econ. 201Q and 202Q, or the equivalents, must be included.

Teaching of Economics. Because Kansas Department of Education regulations governing the certification of secondary economics teachers are very specific and contain requirements beyond the economics major, students planning to be teachers of economics should contact a secondary social studies advisor in the College of Education for program planning.

Courses. Economics courses are listed in the Barton School of Business section of the Catalog.

English Language and Literature

English Language and Literature

The English department offers a broad and flexible program of courses that are central to a liberal arts education while offering students the opportunity for personal enrichment and a variety of career possibilities. The department offers degree programs in creative writing, literature, and English teaching, as well as a range of courses in linguistics. Students who combine an English major with substantial work in other disciplines will find the knowledge and communications skills acquired in their work in English a valuable asset as they seek entrance into a wide range of fields that include communications, education, government, law, and even business.

Major. A major consists of 33 hours, three of which may, with departmental consent, be taken in a cognate subject (such as foreign literature, theatre, etc.) offered in a course by another department. The course work must be distributed as follows:

I. Basic Requirements (21 hours)
   Eng. 272Q, 310, 320Q or 330Q, 360, 361, 362Q, 274 or 315

II. Major Requirements (12 hours with at least 6 upper-division from...)

Minor. A minor consists of 15 hours and requires Eng. 310, 320Q or 330Q and at least six hours of upper-division work. Eng. 101 and 102 are not counted toward a minor. A number of minors have been specially designed to support majors in other fields; for further information, contact the chairperson of the English department.

Creative Writing

A student planning to major in creative writing must complete Eng. 101 and 102 and thereafter complete 33 hours of course work in English, including the following courses:

I. Basic Requirements (12 hours)
   Eng. 272Q, 310, 320Q or 330Q, 274 or 315

II. Major Requirements (3 hours)
   Eng. 285Q (to be completed with a grade of B or better or receive
departmental consent for further
creative writing course work)

III. Skill Requirements (at least 12
hours) from Engl. 301, 303, 401,
403, 517, 518, 585, 586, 604, 605
(except for Engl. 301 and 303, all
of these courses may be repeated
once for credit) or University
Honors English courses (1-3)

IV. Electives (at least 6 hours)
Upper-division hours from any
other area of emphasis within the
department

Minor. A minor with a creative writing
sequence is available and consists of 12
hours of creative writing course work
including Engl. 285Q and 9 hours of skill
courses listed above, plus 3 hours of Engl.
310 or 320Q or 330Q.

Teaching

Students must file a declaration of
English teaching major with an assigned
English-education advisor at the time
they apply to the teacher education
program. A 2.500 grade point average
in English is required of all majors applying
for admission to the professional
semester of student teaching in secondary
school English.

Major for Students Planning to Teach
English in Secondary Schools. The teaching
major in either Fairmount College or
the College of Education is 51 hours
distributed as follows:

I. Language (6 hours)
   English 315 and 316, 317, 667 or 274
II. Composition (6 hours)
   English 680 and 210, 685Q or any
   course in the creative writing
   sequence
III. Literature (27 hours)
   A. Foundations: English 272Q,
       310, 320Q or 330Q, and 340Q
   B. British and American literature;
       Engl. 362Q or 503, 252Q or
       504, 360 or 361
   C. Cross-cultural language/
       literature: Engl. 342, 345, 365
       or 672
IV. Other (6 hours)
   A. Theatre 143G and 221Q
   V. Electives (6 hours)
       Six hours in English, in certifiable
       minor

Composition

Noncredit Courses

011. Syntax, Logic and Organization. (3).
Offered Cr/NCR only. Reviews the basic
elements of written English. Combines lecture,
small-group discussion, and individual tutoring.
For students whose ACT-English scores or
placement test scores do not qualify them for
Engl. 101. Credit not applied for graduation.

013. Basic Skills for ESL I. (3). Offered Cr/NCR
only. Teaches the fundamental elements of
written and spoken English, emphasizing the
acquisition of basic grammatical and syntactical
structures and the writing of paragraphs.

015. Basic Skills for ESL II. (3). Offered
Cr/NCR only. Extends the skills developed in
Engl. 013. Students continue to practice using
basic grammatical and syntactical structures,
work on reading comprehension skills, and
move from the writing of paragraphs to short
essays. Prerequisite: Engl. 013.

Lower-Division Courses

100. English Composition. (3). A required
composition course for non-native-speaking
students scoring below a certain level as
determined by a departmental examination.
Emphasizes reading, writing, and thinking
skills. Credit applied for graduation. Prerequi-
site: Engl. 013 or satisfactory score on place-
ment test.

>101. College English I. (3). General education
basic skills course. Focuses on developing
reading and writing skills appropriate to aca-
demic discourse. Integrates the writing pro-
cess, rhetorical modes, and library skills into
writing assignments related primarily to non-
fiction readings. Prerequisite: qualifying score
on ACT or placement exam, or successful
completion of Engl. 011.

>102. College English II. (3). General education
basic skills course. Emphasizes critical
reading, research, and argumentation. Engl.
102 should be taken sequentially with Engl.
101 in the freshman year. Prerequisite: Engl.
101, with a grade of C or better.

103. Reading, Thinking, and Writing. (3).
A third semester of English composition. Writing
assignments based on literature read during
the semester. Reading material varies with
instructor, but generally follows a specific
theme. Prerequisites: Engl. 101 and 102.

150. Workshop. (1-4). Repeatable for credit.
Material varies according to the needs of
students.

210. Composition: Business, Professional and
Technical Writing. (3). Provides instruction and
practice in writing the kinds of letters, memos,
instructions, and reports required in
the professional world of business and
industry. Emphasizes both formats and
requirements necessary for effective and persuasive
professional communication. Prerequisite: Engl.
101 and 102 or instructor’s consent.

Upper-Division Course

481. Cooperative Education. (1-3). Provides
the student with practical experience, under
academic supervision, that complements and
enhances the student's academic program.
Individual programs must be formulated in
consultation with appropriate faculty sponsors
and approved by departmental consent.
Offered Cr/NCR only.

Courses for Graduate/Undergraduate Credit

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.

680. Theory and Practice in Composition. (3).
Introduces theories of rhetoric, research
in composition and writing programs, and prac-
tices in schools and colleges. Students investi-
gate 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 stu-
dents with credit in Engl. 780.

685Q. Advanced Composition. (3). Explores
the relationships among contemporary issues,
problem-solving and communication. The first
objective is to engage students in interdisci-
plinary inquiry into some aspect of social poli-
cy, inquiry which asks students to apply the
analytical approaches of their major fields to
current issues of broad, general interest. The
second objective is to develop students’ abili-
ties to communicate their knowledge and
assumptions about this issue to a variety of audi-
ences and for a variety of purposes. Prerequi-
site: Engl. 101 and 102 and upper-divi-
sion standing.

780. Advanced Theory and Practice in Com-
position. (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 prac-
tice in advanced writing problems, situations
and techniques and may propose projects for
further special study.

Creative Writing

Lower-Division Course

285Q. Introduction to Creative Writing. (3).
An introductory course; the techniques and
practice of imaginative writing in its varied
forms. Course may be used to fulfill the gen-
eral education requirement only as an electi-
ve (studio and performance). Prerequisites: Engl.
101 and 102.

Upper-Division Courses

301. Fiction Writing. (3). Primary emphasis on
student writing. Students study form and tech-
nique by reading published works and apply
those studies to the fiction they write. Prerequi-
site: Engl. 285Q with a grade of B or better.

303. Poetry Writing. (3). Primary emphasis on
student writing. Students study form and tech-
nique by reading published works and apply
those studies to the poetry they write. Prerequi-
site: Engl. 285Q with a grade of B or better.
Courses for Graduate/Undergraduate Credit

401. Fiction Workshop. (3). Advanced course. Manuscripts will be critiqued to develop skill in writing, rewriting, and polishing. Repeatable for credit. Prerequisites: Eng. 301.

403. Poetry Workshop. (3). Advanced course. Manuscripts will be critiqued to develop skill in writing, rewriting, and polishing. Repeatable for credit. Prerequisites: Eng. 303.

Courses for Graduate/Undergraduate Credit

517-518. Playwriting I and II. (3). Cross-listed as Theater 516 and 517. The writing of scripts for performance. Emphasizes both verbal and visual aspects of playwriting. Not repeatable for credit. Prerequisite: instructor's consent.


Courses for Graduate Students Only

601. Creative Writing: Fiction. (3). Advanced work in creative writing. Repeatable for credit. Prerequisite: consent of creative writing director.

603. 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.

605. Creative Writing: Poetry. (3). Advanced work in the writing of poetry. Repeatable for credit. Prerequisite: consent of creative writing director.

675. Master of Fine Arts Essay. (1-6).


Linguistics

Upper-Division Courses

316. English Sentence Structure. (3). Cross-listed as Ling. 316. The basic rules of English sentence structure, including phonological and grammatical concepts.

317. History of the English Language. (3). Cross-listed as Ling. 317. Linguistic and cultural development of English. Specifically designed for prospective English teachers, but open to all interested students. Prerequisite: Eng. 313 or departmental consent.

320Q. Modern American Writers. (3). General education further studies course. A survey of important works by major American writers since World War I.

325Q. Modern British Literature. (3). General education further studies course. A survey of important works by major writers of the British Isles including Ireland, in the 20th century.

327Q. Origins of the Western Literary Tradition. (3). General education further studies course. A study of the literary forms that first appear in classical and Biblical literature and reappear in the English literary tradition. Readings from mythology, the classics and elected books of the Bible.

274. The Language of Literature. (3). An examination of the principles and problems of literary interpretation that are especially related to language structure.

275Q. Studies in Popular Literature. (3). General education further studies course. Cross-listed as Anthr. 275Q. Studies various forms of popular literature (e.g., revolutionary literature, science fiction, Western fiction, detective novel) emphasizing both the literary merit of the work and the way it reflects popular tastes and values. Repeatable for credit with change of content.

290Q. The Bible as Literature. (3). General education further studies course. Studies the Bible as a literary artifact through extensive readings in both Old and New Testaments. Points out literary techniques and discusses their meaning for the manner of composition of the Bible.

Upper-Division Courses

307G. Narrative in Literature and Film. (3). General education further studies course. A comparative aesthetic analysis of the art of narration in literature and especially in film.


310. The Nature of Poetry. (3). Acquaints the student with the variety of poetic forms and techniques. Notes contributions of culture, history and poetic theory as background to the works under study, but primarily emphasizes the characteristics of poetry as a literary communication.

320Q. The Nature of Drama. (3). General education further studies course. Acquaints the student with narrative fiction in a variety of forms: the short story, short novel and novel. Covers works of fiction drawn from dif-
different cultures and historical periods; focuses on the characteristics of fiction, giving some attention to historical development and to theories of fiction.

336. Women's Personal Narratives. (3). Cross-listed as Wom. S. 330. Explores the literary genre of the journal as practiced by both historical and modern women. Works by both well-known diarists and little-known notebook keepers will be examined. Students complete in-class and out-of-class assignments and will be encouraged to do daily work in a journal of their own. Prerequisites: Engl. 101 and 102.

340Q. Major Plays of Shakespeare. (3). General education further studies course. For students who wish to study the best work of Shakespeare's career in one semester. Students who take this course may take Engl. 515 once for credit.

342. American Folklore. (3). Cross-listed as Anthr. 342. Survey of the types and functions of unwritten traditional materials in the United States, including beliefs, tales, jokes, folk music, customs and crafts, including some ethnic varieties; the unwritten materials that form the uniqueness of American culture.

345. Studies in Comparative Literature. (3). General education further studies course. Study of representative works in the western and ancient Near Eastern literary traditions emphasizing the contrastive relations between themes, types and structures. Readings may be drawn from one or several periods and may include works of fiction, drama, poetry, epic, romance, satire and other types.

346. American Multicultural Literature (3). Provides broad exposure to the literature of various cultures in the U.S., including African American, Native American, Asian American, Chicano/o and immigrants from other cultures. Prerequisites: Engl. 101, 102.

347. World Comparative Literature. (3). Focuses on emergent, contemporary literatures written in or translated into English from Africa, Asia, Australia, the Pacific and the Americas. Texts may include novels, poetry, plays, essays, films and other forms of creative expression. Prerequisites: Engl. 101, 102.

360. Major British Writers I. (3). General education further studies course. Covers the primary writers in British literature from the beginnings through the eighteenth century.

361. Major British Writers II. (3). General education further studies course. Covers the primary writers in British literature from the nineteenth century to the present.

360Q. American Writers of the 19th Century. (3). General education further studies course. The study of the major works in the different genres by important American writers of the 19th century as they relate to the growth of a national literature.

365. African-American Literature. (3). General education further studies course. A survey course; acquaints the student with the most significant Afro-American writers from the 1700s to the present. Covers early slave narratives and early slave poetry to the Harlem Renaissance; student reading, discussion and writing begin with the Harlem Renaissance and end with the 1970s. Prerequisites: Engl. 101 and 102.

400Q. The Literary Imagination: The Tragic, Comic, Heroic, Satiric Modes (3). General education further studies course. Acquaints the general student with the major modes that have shaped the Western literary tradition. Focuses on the tendency of the imagination to construct different kinds of fictions that produce tragic pleasure from pain and suffering, comic pleasure from human folly, heroic pleasure from love, war, adventure, satiric pleasure from hypocrisy. Also acquaints students with the nature of literary inquiry by approaching works from a variety of critical perspectives.

421Q. Epic and Romance. (3). Cross-listed as Honors 400Q. Readings in classic and early western European narratives, beginning with Homer's bronze-age epic and ending with late-medieval romance. Examines the literary conventions and cultural assumptions that typify these works. Particular attention given to the historical shift in interest from epic to romance as a reflection of broad changes, not only in literary form and content, but also in social customs and world view.

450. Independent Reading. (1-3). For majors and nonmajors who wish to pursue special readings or research projects in areas not normally covered in course work. Repeatable for credit.

Courses for Graduate/Undergraduate Credit

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 literature.

504. Studies in American Literature II. (3). Fiction, poetry and drama from the late 19th century to World War I. 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.

512. Studies in Fiction. (3). Subjects announced each semester. Repeatable for credit.


514. Studies in Drama. (3). Subjects announced each semester. Repeatable for credit.

515. Studies in Shakespeare. (3). Subjects announced each semester. Repeatable for credit; except by students who take Eng. 340Q. Prerequisites: junior standing and one college literature course or instructor's consent.

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.

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.

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.

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.

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.


533. Studies in Contemporary Literature. (3). Modern literature, primarily British and American, since 1950. Subjects announced each semester. Repeatable for credit.

535. Literary Images of Women: Diverse Voices. (3). Cross-listed as Wom. S. 535. Explores literature written in English by women of diverse races, classes and sexual orientations, as well as of varying sexual orientation, age and social class patterns and the way that women have been represented in the literary canon. Credits and/or course periods covered, critical theories explored and specific authors studied vary in different semesters.

536. Writing by Women. (3). Cross-listed as Wom. S. 536Q. Explores various themes in critical approaches to literature composed by women writers, especially those whose works have been underrepresented in the literary canon. Courses and course periods covered, critical theories explored by the individual instructor. Repeatable for credit. Prerequisite: departmental consent.

580. Special Studies. (1-3). Topic selected and announced by the individual instructor. Repeatable for credit. Prerequisite: departmental consent.

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.

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. Prerequisite: Junior standing and one college literature course, or instructor’s consent.

750. Workshop. (2-4). Repeatable for credit.

Courses for Graduate Students Only

800. Introduction to Graduate Study in English. (3). Prepares students to perform effectively in graduate classes in English. Concerned with: (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. Throughout the semester a balance between criticism and research is maintained.

817. Graduate Readings in 20th Century British Literature. (3). Yeats, Joyce, Lawrence, Auden, Spender and their contemporaries.

821. Graduate Readings in American Literature I. (3). From the beginnings to 1870 emphasizing Emerson, Thoreau, Hawthorne, Melville, Whitman and Dickinson.

822. Graduate Readings in American Literature II. (3). From 1870 to 1920 emphasizing James, Twain, Crane, Dreiser, Robinson and Frost.


826. Theories of Rhetoric: Renaissance to Early Modern. (3). Cross-listed as Comm. 831. A study of the emerging patterns of rhetoric from the Second Sophistic to modern times. Analyzes the rhetorical systems associated with such figures as Augustine, Ficino, Bulwer, Sheridan, Steele, Rush, John Quincy Adams, Blair, Campbell and Whately.

830. Graduate Studies in Drama. (3). Selected topics in the history and nature of dramatic literature.

832. Graduate Studies in Fiction. (3). Selected topics in the development of the form and content of prose fiction.

834. Graduate Studies in Poetry. (3). Selected topics in forms, techniques and history of poetry.


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; but with change of content and departmental consent, it will be repeatable for credit.

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.

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.

860. Graduate Seminar in Special Topics. (3). Intensive study of selected texts, writers or literary problems. Seminar discussions, reports and research projects. Repeatable for credit with departmental consent.


Film Studies

The film studies minor at Wichita State University is designed to provide students interested in film and the visual media with a focused sense of the possibilities, limitations, and actual accomplishments of the visual media as they have, in fact, developed. The minor also offers opportunities to study film as an art form and to gain experience in media production. The film studies minor consists of 18 semester hours from the courses listed below, selected with the approval of the coordinator of film studies.

Wichita State University does not at this time offer a film studies major. However, the minor will prove useful to students majoring in literature, journalism, and speech, and will also appeal to those in fields where some knowledge of mass communication as a cultural phenomenon is desirable, including sociology, history, anthropology, psychology, education, administration, and American studies.

Students seeking more information about the film studies minor should contact Dr. Christopher Brooks in the Department of English.

Courses approved for the film studies minor are Hist. 106Q, The Way It Was: Western Civilization in Film; Comm. 220Q, Introduction to Film Studies; Art G 231, Basic Photography (Motion Picture); Engl. 307G, Narrative in Literature and Film; Comm. 320, Cinematography; Art G. 430, Television for Graphic Design; Comm. 304, Television Production and Direction; and Comm. 604, Advanced Television Production and Direction.

French

See Modern and Classical Languages and Literatures.

Geography

Only courses 201 and 235 are intended as physical science courses. All other geography courses are intended as social science offerings.

**Geography Minor.** A minor in geography consists of at least 15 hours including Geog. 125Q or 201 or the equivalent.

Lower-Division Courses

- 125Q. Principles of Human Geography. (3). General education introductory course (social science). An introductory course examining the development of human and cultural landscapes.

- 201. Physical Geography. (3). 2R; 3L Lab fee. General education introductory course (natural science). Emphasizes the physical basis of geography, including climate, terrain, soils, landforms and the seas; economic resources; cartographic elements; introduction to regional studies. Field trips are required at the option of the instructor.

- 210Q. Introduction to World Geography. (3). General education introductory course (social science). A general survey of world geography including an analysis of the physical, political, economic, historical and cultural geography of the world's 11 regions.

- 235. Meteorology. (3). 2R; 2L Lab fee. An introductory study of the atmosphere and its properties and the various phenomena of weather. Includes a brief survey of important principles of physical, dynamic, synoptic and applied meteorology. Does not apply toward a major or minor in geology. Requires field trips at the option of the instructor. Prerequisite: instructor's consent.

- 262Q. Cultural Geography. (3). An introduction to cultural geography emphasizing man's geographical distributions, the spatial aspects of his cultural activities, the sources and techniques of his livelihood and the relationships to his environment.

Upper-Division Course

- 320. Field Studies in Geography. (1-6). Off-campus, systematic field study in a selected area of geographic significance. Course is given upon demand and may be repeated for credit when the locality and content differ. Where appropriate, travel, lodging and board costs are charged.
Courses for Graduate/Undergraduate Credit

510. World Geography. (3). A study of world regions including an analysis of each region's physical, political, economic, historical, and cultural geography. Focus on a specific geographical problem for in-depth study and analysis. Prerequisite: instructor's consent. May not be taken if credit has been received for Geog. 210Q.

>520. Geography of the United States and Canada. (3). General education further studies course (social science). Physical, political, economic, historical, and human geography of the United States and Canada.

>530. Geography of Latin America. (3). General education further studies course (social science). Physical, political, economic, historical and human geography of Latin America.

>552. Geography of Europe. (3). General education further studies course (social science). Physical, political, economic, historical and human geography of Europe.

580. Economic Geography. (3). A geographical analysis of the distribution and utilization of basic world resources.

620. Field Studies in Geography. (2-6). Off-campus, systematic field study in a selected area of geographic significance. Course given upon demand and may be repeated for credit when the locality and content differ. Where appropriate, travel, lodging and board costs are charged.

630. Geography of Mexico. (3). Physical, human and cultural geography of Mexico, including important archaeological and historical settings. Relations of sources to arts, crafts, industry and architecture.

670. Urban Geography. (3). 2R; 3L. Lab fee. Geography of cities; the origin, growth, functions, characteristics and environmental problems of urban areas; structure and dynamic elements of intraurban space; land-use analysis and approaches to urban planning; and problems of urban ecology.

695. Special Studies in Geography. (1-3). 3R or 2R; 3L. Lab fee. (Lab is included when appropriate.) Systematic study in a selected area of topical interest in geography. Course given upon demand and is repeatable for credit when content differs. May require field trips. Prerequisite: junior standing.

750. Workshop in Geography. (1-4). Short-term courses with special focus on geographical problems. Prerequisite: instructor's consent.

Course for Graduate Students Only

820. Field Studies in Geography. (2-6). Off-campus, systematic field study in a selected area of geographic significance. Course given upon demand and may be repeated for credit when the locality and content differ. Where appropriate, travel, lodging and board costs are charged. Prerequisite: instructor's consent.

Geology

The Bachelor of Science (BS) degree in geology provides in-depth training for professional work in industry or government as well as for graduate study. The Bachelor of Arts (BA) degree in geology provides training for graduate study or teacher preparation background. A number of assistantships, fellowships, and scholarships is available. Contact the Department of Geology for further information.

The geology program emphasizes field and laboratory skills in sedimentology, geochemistry, paleontology, paleoclimatology, structure and geophysics, mineral and fuel resources, and related fields. Attention is directed to solving problems of local and global perspective related to earth systems and environmental analysis. Students who expect to achieve either the BS or BA in geology within a minimum period of time should have completed geometry, trigonometry, and two years of algebra in high school. Chemistry and physics also are recommended in high school.

Geology Major. A major with the BA requires a minimum of 33 hours in geology, including the following:

1. Geol. 111Q, General Geology
2. Geol. 312, Historical Geology and Stratigraphy; 320, Mineralogy; and 324, Petrology
3. Geol. 526, Sedimentary Geology; 544, Structural Geology; 581, Numerical Geology
4. Eleven additional hours of upper-division geology electives or other sciences with prior written approval of the department.

Required supporting sciences for the BA degree are:

1. Any approved course in biological sciences or Anthr. 505
2. Any one of the following groups
   a. Chem. 111Q or 123Q, and Phys. 213Q and 214Q (or 313Q, 315Q and 316Q)
   b. Chem. 111Q and 112Q (or 123Q and 124Q) and Phys. 213Q or 313Q, 315Q
4. AE 227 (or an approved substitute).

A major with the BS requires a minimum of 45 hours in geology, including the following:

1. Geol. 111Q, General Geology
2. Geol. 312, Historical Geology and Stratigraphy; 320, Mineralogy; and 324, Petrology
3. Geol. 526, Sedimentary Geology; 544, Structural Geology; 581, Numerical Geology; and 640, Field Geology
4. A minimum of 17 hours in elective geology courses at 500 or above.

Required supporting sciences for the BS degree are:

1. Biol. 203Q or Biol. 575 or Anthr. 505
2. Math. 242Q and Math. 243
3. Stat. 370
4. AE 227 (or an approved substitute)
5. Chem. 111Q and 112Q or Chem. 123Q and 124Q
6. Phys. 213Q and 214Q or Phys. 313Q and 314Q
7. Any additional course from the following list (or an approved substitute):
   a. Math. 344 or Math. 511; Anthr. 613 or 711; any physics course that has a prerequisite of Phys. 214 or 314; any chemistry course that has a prerequisite of Chem. 112Q or 124Q; Biol. 578 or either of the biology courses listed in Item 1 above that were not completed.

Minor. A minor in geology consists of at least 15 hours of geology including Geol. 111Q, General Geology.

It is suggested that students minoring in geology consult with the department in selecting courses most appropriate to their major field of study.

Nonmajor and Nonminor Students: A non-major or non-minor student who wishes to achieve the broadest terminal background knowledge of geology is advised to take Geol. 111Q, General Geology, and 512, Historical Geology and Stratigraphy. Similar advice is offered to the potential major whose decision to elect geology is pending.

Lower-Division Courses

101Q. Science and Environment. (3). Study of the physical environment and environmental education—the educational process concerned with man's relationship with his natural and manmade surroundings; includes the relation of population, pollution, energy, resource depletion and allocation, conservation, transportation, technology, economic impact and urban and rural planning to the total human environment.

>102. Earth Science and the Environment. (3). 3R or (4) 3R; 2L. General education introductory course. A study of the processes that shape the earth's physical environment; the impact of human activities on modifying the environment; use and abuse of natural resources including soil, water, and air; waste disposal; and natural environmental hazards. Geol. 102 (4) 3R; 2L is recommended for students desiring general education credit for a natural science laboratory experience. Credit not allowed in both Geol. 102 and 111Q.

>111Q. General Geology. (4). 3R; 2L. General education introductory course. An overview of the earth, the concepts of its origin, composition, materials, structure, landforms and histo-
ry; and natural processes operating to create the earth's physical environment. May require field trips to the earth laboratory. Credit not allowed in both Geol. 102 and 111Q.

150. Workshop. (1-4). Short-term courses focusing on geological problems. Prerequisite: instructor's consent.

Upper-Division Courses

>300G. Energy, Resources and Environment. (3). General education issues and perspectives course. An examination of man's effects on his environment and man's dependence on earth resources in meeting his needs. Examines the significance of availability and location of energy and mineral resources relative to the protection and improvement of man's environment and man's desire for a high standard of living. Some emphasis on urban geology.

>302Q. Earth and Space Sciences. (3). 2R; 2L. General education further studies course. A general survey of the physical environment, including elements of geography, geology, meteorology, climatology, oceanography, and astronomy. May require field trips.

>310. Oceanography. (3). General education further studies course. Geologic origin of ocean basins and sea water; dynamics of waves, tides and currents; physical and chemical properties of sea water; diversity of life in the oceans; economic potential, law of the sea and man's effect on the marine environment.

>312. Historical Geology and Stratigraphy. (3). General education further studies course. Stratiographic aspects and systematic review of earth history and its preservation in the rock record using field evidence for sequences of physical, biological, and tectonic events in selected areas. Also includes the origin and evolution of life. Field trips required. Prerequisite: Geol. 101Q or 111Q or 205Q or equivalent.

>320. Mineralogy. (3). 1R; 6L. General education further studies course. Elementary crystallography. A study of the origin, composition and structure of the rock-forming minerals with laboratory emphasis on recognition of their typical forms, occurrences, associations and identification. May require field trips. Prerequisite: Geol. 111Q.

324. Petrology. (3). 1R; 6L. The origin, distribution, occurrence, description and classification of igneous, metamorphic and sedimentary rocks with laboratory emphasis on the identification of rocks. May require field trips. Prerequisite: Geol. 320.

410. Honors in Geology. (3). Senior thesis for departmental honors. The independent study project on a topic of the student's choice must be original research or creative work. Repeatable to a maximum of six credit hours. Prerequisite: acceptance by the Emory Lindquist Honors Program and departmental approval.

430. Field Studies in Geology. (2-6). Off-campus, systematic field study in a selected area of geologic significance. Course is given upon demand and may be repeated for credit when locality and content differ. Where appropriate, travel, lodging, and board costs are charged.

Courses for Graduate/Undergraduate Credit

501. Raw Materials of Antiquity. (3). 2R; 2L. Nature of rocks, minerals and metallic ores used in prehistoric and ancient times. Also weathering, sedimentation and soil-forming processes; elements of stratigraphy; geologic history of the Pleistocene and Recent Epochs; relative and absolute age dating; mineralogy of clays and ceramics; mining and metallurgical processes of antiquity. Prerequisite: Anth. 501 or equivalent or instructor's consent.

520. Optical Mineralogy. (3). 1R; 6L. Optical properties of amorphous and crystalline materials in polarized light. Introduces use of the petrographic microscope in the quantitative determination of rock-forming and minor minerals in thin section and immersion oil methods. Prerequisite: Geol. 320.

526. Sedimentary Geology. (3). 2R; 3L. Origin, classification, primary structures and physicochemical processes controlling deposition of sedimentary rocks, especially carbonates. Includes an analysis of modern and ancient sedimentary depositional environments and a systematic petrographic study of sedimentary rocks in thin section, insoluble residues and heavy-mineral analysis. May require field trips. Prerequisite: Geol. 324.

540. Field Mapping Methods. (3). 9L. Field mapping methods with special reference to use of level, compass, barometer, alidade and airphoto. Field trips required. Prerequisite: Geol. 201 or Geol. 111Q.

541. Plate Tectonics. (3). General education further studies course. The mathematical treatment of plate tectonics including aspects of spherical geometry necessary to understand the movement of plates over the earth's surface. Includes earthquake focal mechanisms and paleomagnetic interpretations of plate movements; driving forces for plate tectonics; the history of the development of plate tectonic theory. Prerequisite: Geol. 111Q and Math. 112 or 123 or equivalent mathematical background.

544. Structural Geology. (3). 2R; 3L. Stress-strain theory and mechanics of rock deformation, description, and genesis of secondary structural features in crustal rocks resulting from diastrophism, elements of global tectonics, and laboratory solution of geologic problems in three dimensions and time. May require field trips and field problems. Prerequisites: Math. 112 or 123, Geol. 312 or taken concurrently, and Geol. 324.

552. Physical Stratigraphy. (3). 2R; 3L. Description, classification, correlation and relative ages of stratigraphic rock units and the origin of primary structures of clastic sedimentary rocks. Laboratory emphasis on binocular microscopic examination and physical properties of unconsolidated sediments and clastic sedimentary rocks. Requires field instruction in stratigraphic mapping methods. Prerequisites: Geol. 312, 320, and 540 or equivalent.

560. Geomorphology and Land Use. (3). General education further studies course. Identification of landforms and their genesis; 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. 111Q or Geol. 101Q or Geol. 300Q with a grade of B or better.

562. Regional Geology of the United States. (3). A detailed regional survey of the general geology, geomorphology, stratigraphy and structural geology and their interrelationship in the United States. Requires field trips (instructor's option). Prerequisite: Geol. 560 or instructor's consent.

564. Remote Sensing Interpretation. (3). 2R; 3L. Introduces interpretation techniques for most types of images acquired by remotely positioned sensors. Physical principles that control various remote sensing processes used in the electromagnetic spectrum are applied to geological, land use planning, geography, resource evaluation and environmental problems. Derivative maps generated from a variety of images. May require field trips. Prerequisite: Geol. 111Q, Geol. 201 or equivalent.

570. Biogeology. (3). 2R; 3L. General education further studies course. Systematic survey of major fossil biogeological materials, analysis of the origin and evolution of life and paleoecological interpretation of ancient environments and climates. Includes hands-on, binocular microscopic examination of major fossil biogeological materials. Includes application of analyzed fossil data to the solution of problems in biogeochronology, paleoecology, palaeoclimatology and paleoecology. Cites examples from fields of invertebrate, vertebrate and microfossil, and palynology. May require museum and field trips. Prerequisite: Geol. 512 or 552.

574. Special Studies in Biogeology. (3). 2R; 3L. General education further studies course. A systematic study in selected areas of biogeology and paleontology. Content differs upon demand, to provide in-depth analysis in the fields of: (a) invertebrate paleontology, (b) vertebrate paleontology, (c) microfossil paleontology, (d) palynology and (e) paleoecology. Gives appropriate laboratory instruction in the systematics, taxonomy and biological relationships within the selected fields listed. May require field trips. Repeatable for credit to cover all five areas listed.

581. Numerical Geology. (3). 2R; 3L. Introduce applications of numerical methods to problems in geology and environmental geology. Discuss algorithms and computer software for the analysis of numerical data including univariate and multivariate statistical and deterministic techniques. Also, applications of a higher order computer language for the manipulation of measurements. Study principles of fitting data, quantification, and analysis of geologic images, and modeling of simulated geologic phenomena. Prerequisites: Stat. 370 or equivalent, AE 227 or demonstrated knowledge of a higher order programming language, Math. 344 or 555 recommended or instructor's permission.
621. Geochemical Cycling. (3). The chemistry 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. 311Q and Chem. 1110 or instructor's consent.

620. Field Studies in Geology. (2-6). Off-campus, systematic field study in a selected area of geological significance. Course given upon demand and may be repeated for credit when locality and content differ. Where appropriate, travel, lodging and board costs are charged.

645. Geoscientific Presentation. (2). Essential elements of effective communication of geoscientific information in both written and oral formats. Students prepare original manuscripts on results of geologic research and make numerous in-class presentations utilizing professionally acceptable visual displays. Prerequisites: Geol. 312, but course restricted to juniors, seniors, and graduate students; or instructor's consent.

650. Geohydrology. (3). 2R; 3L. The hydrologic cycle, physical and chemical properties of water; fluid flow through permeable media; exploration for and evaluation of groundwater; water quality and pollution; and water law. Prerequisites: Geol. 552 and Math. 243 or instructor's consent.

679. Independent Study in Geology. (1-3). Independent study on special problems in the field of geology: (a) general, (b) mineralogy, (c) petrology, (d) structural, (e) paleontology, (f) economic geology, (g) sedimentation, (h) stratigraphy, (i) geophysics and (k) petroleum. Prerequisites: Geol. 312 or instructor's consent.

702. Environmental Science I. (4). 2R; 3L. Cross-listed as Biol. 702 and Chem. 702. Advanced theoretical and applied principles of the interdisciplinary study of environmental science. Includes chemical cycling, atmospheric chemistry, aquatic chemistry, and phase interactions. The laboratory portion addresses local environmental problems from a risk assessment perspective. Prerequisites: Geol. 702 and 703 (or equivalent) are required for all graduate students in the master's of environmental science program. Prerequisite: acceptance in the master's of environmental science program or instructor's consent.

703. Environmental Science II. (4). 2R; 3L. Cross-listed as Biol. 703 and Chem. 703. Advanced theoretical and applied principles of the interdisciplinary study of environmental science. Includes environmental chemical analysis, environmental toxicology, aquatic micro-biochemistry, environmental biochemistry, water treatment, photochemical smog, and hazardous waste chemistry. The laboratory portion addresses local environmental problems from a risk assessment perspective. Prerequisites: Geol. 702 and 703 (or equivalent) are required for all graduate students in the master's of environmental science program. Prerequisite: acceptance in the master's of environmental science program or instructor's consent.

704. Environmental Science Colloquium. (1). Cross-listed as Biol. 704 and Chem. 704. Students in the master's of environmental science program 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.

705. Environmental Science Internship. (0-6). Cross-listed as Biol. 705 and Chem. 706. Students in the master's of environmental science program may gain interdisciplinary skills in environmental science by participating in applied and/or basic research internship projects with local businesses, 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: Bio. 702 and 703 or equivalent.

720. Geochemistry. (3). The chemistry of natural aqueous solutions and their interaction with minerals and rocks; thermodynamics and kinetics of reactions; emphasizes application to sedimentary environments and environmental problems. Requires some laboratory work. Prerequisites: Geol. 324 and Chem 112Q or instructor's consent.

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.

725. Clay Mineralogy. (3). 2R; 3L. An evaluation of compositional and structural elements of clay-mineral families, related phyllosilicates and associated diageneric-authigenic minerals in sedimentary environment. Also laboratory identification and classification of minerals by x-ray powder diffraction and thermal analysis. Prerequisite: Geol. 526.

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 systems. May require field trips. Prerequisites: Geol. 526, 552 or equivalents.

727. Carbonate Diagenesis. (3). 2R; 3L. An in-depth analysis of 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 diagnostic tools; cathodoluminescence and x-ray diffraction studies of carbonates; origin and porosity. Prerequisite: Geol. 520 (unless waived by instructor) and 726.
750. Perspectives: 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 related 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 681, 680; or instructor’s consent.

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.

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.

750. Workshop in Geology. (1-3). Short-term courses with special focus on geological problems. Prerequisites: graduate standing and/or instructor’s consent.

751. Advanced Geohydrology. (3). Integration of practical and theoretical coverage of subsurface water 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. Topics include cover groundwater quality, sources of groundwater contamination, retardation of contaminants, retardation and attenuation of dissolved solids and the rate of 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.

760. Exploration Geophysics. (6). An introduction to the theory and application of geophysical techniques for hydrocarbon, mineral, and groundwater prospecting. Topics include use of seismic techniques; instrumentation for acquisition on land and sea; seismic processing: structural and stratigraphic modeling; 3-D seismic exploration, and seismic refraction techniques. Prerequisites: completion of geology undergraduate math and physics requirements; Math. 344 or 555; Geol. 324 and 544; and instructor’s consent.

781. Advanced Numerical Geology. (3). Involves practical implementation of algorithms and computer code. Included is the analysis of multivariate techniques and the development of the computer/algorithms skills needed to handle very large databases. Topics include standard statistical approaches to data analysis; treatment of applied linear algebra and matrix theory; and the application of linear and non-linear discriminant analysis, various factor analytic techniques, and analytic and non-linear unmixing analysis, and other forms of data modeling. Prerequisites: Geol. 581 or equivalent, competence in one or more high level computer languages, Math 344 or 555, and instructor’s consent.

Courses for Graduate Students Only

800. Research in Geology. (3-6). Research in special areas of geology: (a) general, (b) mineralogy, (c) petrology, (d) structural, (e) paleontology; (f) economic geology, (g) sedimentation, (h) stratigraphy, (i) geophysics and (k) petroleum. Requires a written final report. Prerequisite: consent of sponsoring faculty.

808. History of Geology. (1-3). Selected events and personalities in geology that have led to our present understanding of geology’s place in science. Prerequisite: instructor’s consent.

810. Advanced Graduate Studies in Geology. (1-6). Systematic study in a selected topic of professional or applied geology. Course given upon demand and may be repeated for credit when content differs. May require field trips. Prerequisites: graduate standing, instructor’s consent and two years of professional postgraduate practice in geology.

821. Special Studies in Geochemistry. (3). A systematic study in selected areas of geochemistry. Content differs upon demand to provide in-depth analysis in fields of (a) sedimentary carbonate and silicate geochemistry and mineralogy, (b) organic geochemistry, (c) high pressure, temperature and temperature thermodynamics of earth materials, (d) exploration geochemical geochimistry, (e) exogenic geochemical cycling, (f) stable isotope geochemistry. May be taken for graduate credit only upon special permission. May require some laboratory work. Prerequisite: Geol. 720 or instructor’s consent.

823. Igneous and Metamorphic Petrology. (3). Detailed study of sedimentary rocks and their origins. Facilitates determinations of mineral compositions, textures, structure, origins and classifications of igneous and metamorphic rocks. Thin-section studies to facilitate rock identification and the determination of petrogenetic relationships. May require field trips. Prerequisite: Geol. 520.

826. Sedimentary Petrology. (3). Detailed study of sedimentary rocks and their origins. Facilitates determinations of mineral compositions, textures, structure, fabrics and petrogenetic relationships by the use of thin sections, peels and geochemical analyses. May require field trips. Prerequisite: Geol. 520.

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 and may be repeated 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.

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.

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. Prerequisite: Geol. 544 and 552 or instructor’s consent.

860. Special Topics in Geophysics. (3). Systematic study in one or more selected topics of theoretical and applied geophysical techniques. Emphasis on 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. 581, 760; Math 344 or 555; or instructor’s consent.

870. Advanced Biogeography. (3). 2R; 3L. Paleocological reconstruction of ancient plant/animal communities and environments emphasizing community structure, biot stratigraphy, synthesis of total raw data and problem solving. May require field trips. Prerequisite: a course in biogeology or equivalent.

880. 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. Emphasis on 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 isotopic chronostatigraphic techniques, modeling global phenomena, and simulations of multi-phase flow in aquifers and reservoirs. Prerequisites: Geol. 581, 781; and Math 344 or 555; or instructor’s consent.

890. Thesis. (1-6). Prerequisite: departmental consent.

German, Greek

See Modern and Classical Languages and Literatures.

Gerontology

See Urban and Public Affairs, Hugo Wall School of.

History

The major in history provides a program that is varied and flexible enough to answer the needs for an integrated, liberal education. The program has three areas

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of concentration: the ancient and medieval world, modern Europe, and the United States.

Courses also are offered in such areas as urban history, military history, women in history, popular culture, family history, and the Holocaust.

The history major, often in combination with courses in other disciplines, touches many fields of endeavor, providing flexibility for entrance into a wide variety of career opportunities, including law, professional writing, teaching, communications, business, government, and public affairs.

Major. A major in history requires a minimum of 33 hours, including 9 credit hours of either Hist. 100G, 101G, or 102G, and 3 credit hours of either Hist. 131Q or 132Q. Additionally, all history majors must complete Hist. 200 and 698. A minimum of 15 upper-division hours, including at least one upper-division course in three fields, must be selected from the following areas: ancient and medieval history; modern European history; or American history.

Nine upper-division hours are to be selected from courses in each appropriate area and must be chosen in consultation with an advisor. All history majors must take Hist 200 and 698. In addition, sufficient hours need to be elected to bring the total to 29. At least six of these hours must be upper-division hours that are not in the area of specialization.

Minor. A minor in history consists of 15 hours, including a maximum of two lower-division courses and at least three upper-division courses.

Teaching of History. Because Kansas Department of Education regulations governing the certification of secondary history teachers are very specific, students planning to be teachers of history should contact a secondary social studies advisor in the College of Education for program planning beyond the requirements of the history major.

Lower-Division Courses

100G. The Human Adventure: World Civilization Since 1500. (3). General education introductory course. An introductory history of the human experience during the past five centuries, with attention given to the major social, cultural, economic and political traditions of Asia, Africa, and the Americas, as well as Europe.

101G & 102G. History of Western Civilization. (3 & 3). General education introductory courses. 101G: prehistory to 1648. 102G: 1648 to the present.

106Q. The Way it Was: Western Civilization in Film. (3). Selected topics in the history of Western civilization on topic(s) dealt with in films from the 17th century to the present. Not open to history majors or to those with credit in Hist. 101G and 102G.

110. Russian Studies. (3). Cross-listed as Russ. 110 and Pol. S. 110. Team-taught by faculty from history, political science, and modern and classical languages and literatures. Prepares students wishing to pursue additional courses and/or programs in Russian history, Russian language and literature, Russian government and politics, and/or international relations, including business. Covers medieval, czarist, Soviet, and present day (post-Soviet) Russia.

131Q & >132Q. History of the United States. (3 & 3). General education introductory courses. 131Q: survey from the colonial period to 1877. 132Q: survey from 1877 to the present.

150. Workshop in History. (2-3).

200. Introduction to Historical Research and Writing. (3). Basic instruction in research methodology, composition and criticism. Required of history majors.

213. American Popular Culture. (3). Cross-listed as Anthr. 213. An examination of popular culture from colonial times to the present emphasizing the media explosion since the Civil War. Looks at the American past through the eyes of mass-man, suggesting that mass-man experienced the past differently from what traditional surveys indicate. Such topics as popular music, cinema, pulp magazine literature, comics, television, cult heroes, stereotyping of public issues, family life, fashion and familiar items of household technology are treated seriously rather than as side-shows to the more serious business of politics and finance.

220. Media Courses in History. (2-3). Courses created or coordinated by the Department of History which are offered through various media: radio, television and newspaper. Areas of historical emphasis vary from course to course.

222. East Asia. (3). Cross-listed as Pol. S. 222, LAS-1 222Q and Rel. 222Q. A survey of basic topics on China, Korea and Japan, including history, culture, society, philosophy, religion, politics and economics. Taught by a team of instructors from several departments.

225. Your Family in History. (3). Bridges the gap between history and genealogy through demonstrations of the kinds of research techniques available to those who are interested in creating a family history. Students demonstrate understanding of these techniques in a family history project.

Upper-Division Courses


310. Special Topics in History. (2-3). Repeatable twice for credit. Prerequisite: departmental consent.

>311 & >312. History of Latin America. (3 & 3). General education further studies courses. 311: a study of Spanish and Portuguese colonization of America. 312: an examination of the national period from the wars of independence to the present.

>313 & >314. English History. (3 & 3). General education further studies courses. 313: from the earliest times to the beginning of the Stuart period, emphasizing the origin and development of institutions, customs and nationalism. 314: from the beginning of the Stuart period to the present.

315. Modern German History. (3). Surveys German history from the end of the Napoleonic era in 1815 to the fall of the Berlin Wall in 1989.

316. The Jewish Experience in Christian Europe. (3). Introductory survey course. Explores students to some of the main themes in the history of Jewish civilization in Western culture and society from the early Middle Ages to the present.

>317. The Holocaust. (3). General education further studies course. Investigates the conditions within European society which led to and ultimately culminated in the murder of approximately 6 million Jews.

320. Russian History Survey. (3). General education further studies course. A survey of Russian history from 862 A.D. to the present.

321. The Viet Nam Conflict. (3). General education further studies course. Examines the Viet Nam conflict, beginning with the French experience and ending with the final battles in 1975.


340. World War II. (3). General education further studies course. An introduction to the background and causes of World War II, as well as the military, diplomatic, economic, psychological, and scientific dimensions of the war. Considers the legacy of the war in light of the postwar world.

357. Women in the Ancient World. (3). General education further studies course. Examines the myth and realities of women's lives in the traditional societies of ancient Greece and Rome. Explores how women's social and economic roles varied from culture to culture and how they changed over time from the age of primitive matriarchy to the Christian era. Investigates the influence of these cultures on our own.

359. The Greek World. (3). General education further studies course. Surveys Greek history and culture from the Minoans to the Roman Conquest.
Courses for Graduate/Undergraduate Credit

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;501</td>
<td>The American Colonies. (3). General education further studies course. Colonization of the New World emphasizing the British colonists and their development.</td>
</tr>
<tr>
<td>&gt;502</td>
<td>The American Revolution and the Early Republic. (3). General education further studies course. Examination of selected phases of the revolutionary, confederation, and federal periods.</td>
</tr>
<tr>
<td>&gt;503</td>
<td>The Age of Jefferson and Jackson. (3). General education further studies course. Emphasizes roots of urban problems, foundations of dissent policy toward minority groups, and evaluation of imperial expansion.</td>
</tr>
<tr>
<td>&gt;507</td>
<td>The United States: the 20th Century. (3). General education further studies course. Examines the political, social, and economic issues from the Progressive Era through World War II.</td>
</tr>
<tr>
<td>&gt;508</td>
<td>The United States: the 20th Century, 1945-present. (3). General education further studies course. The history of the United States from the Truman through the Nixon administrations.</td>
</tr>
<tr>
<td>&gt;515</td>
<td>Economic History of the United States. (3). Cross-listed as Econ. 627.</td>
</tr>
<tr>
<td>&gt;516</td>
<td>History of American Business. (3). General education further studies course. A history of American business enterprise from colonial times to the present, with special emphasis on 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>
</tr>
<tr>
<td>&gt;517 &amp; &gt;518</td>
<td>Constitutional History of the United States. (3 &amp; 3). General education further studies course. 517: the evolution of the American constitutional system from English and colonial origins through the Civil War. 518: American constitutional development from Reconstruction to the present.</td>
</tr>
<tr>
<td>&gt;519</td>
<td>Social History of the U.S. to 1865. (3). Survey of American thought and society to the end of the Civil War.</td>
</tr>
<tr>
<td>&gt;521 &amp; &gt;522</td>
<td>Diplomatic History of the United States. (3 &amp; 3). General education further studies courses. 521: from independence through World War I. 522: continues to present.</td>
</tr>
<tr>
<td>&gt;524</td>
<td>American Military History. (3). General education further studies course. A history of the military in America, from the colonial period to the present, emphasizing warfare and military institutions and their impact on American social, economic, and political traditions.</td>
</tr>
<tr>
<td>&gt;526</td>
<td>History of Wichita. (3). General education further studies course. A history of Wichita, Kansas, from 1865 to the present, with emphasis on the lessons of local history for future planning and its importance to an individual citizen's sense of place.</td>
</tr>
<tr>
<td>&gt;527</td>
<td>Indians of Kansas. (3). General education further studies course. History of Indian occupation of the Kansas region from initial white contact to the present. Emphasizes Indian-white relations in the 19th century, forced removal of the remnant tribes, intertribal and intra-tribal relations, and consequent legal and cultural problems.</td>
</tr>
<tr>
<td>&gt;530</td>
<td>The American Woman in History. (3). General education further studies course. Cross-listed as Wom. S. 530. Examination of the history, status, and changing role of women in American society.</td>
</tr>
<tr>
<td>&gt;531</td>
<td>American Environmental History. (3). General education further studies course. Examination of the historical, physical, economic, scientific, technological, and industrial interactions of the peoples of America with their environment. Particular emphasis is placed on the period from 1800 to the present.</td>
</tr>
<tr>
<td>&gt;533</td>
<td>The American City: from Village to Metropolis. (3). General education further studies course. A study of urbanization and urban life from colonial times to the present—changing life-styles and thought patterns, urban landscape, artistic assimilation, emergence of the suburban, political and ecological adjustments, and the influence of new technology and forms of business organization.</td>
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<tr>
<td>&gt;534</td>
<td>History of the Old South. (3). General education further studies course. An examination of Southern civilization prior to the American Civil War.</td>
</tr>
<tr>
<td>&gt;535Q</td>
<td>History of Kansas. (3). General education further studies course. History of the Kansas region from Spanish exploration to the present, emphasizing the period after 1854.</td>
</tr>
<tr>
<td>&gt;537</td>
<td>The Trans-Mississippi West. (3). General education further studies course. History of the Trans-Mississippi West, from Spanish, French and Anglo-American penetration and settlement west of the Mississippi River from the 16th century to about 1900.</td>
</tr>
<tr>
<td>&gt;538</td>
<td>The American West in the Twentieth Century. (3). General education further studies course. Explores the growth of the trans-Mississippi West in the 20th century, with particular attention to political development, economic growth, cultural manifestations, the role of minority groups and the impact of science and technology.</td>
</tr>
<tr>
<td>&gt;541</td>
<td>Modern France. (3). General education further studies course. History of the major trends in French history from Napoleonic to DeGaulle emphasizing French attempts to adjust politically, socially, economically and culturally to the changing conditions of modern industrial society.</td>
</tr>
<tr>
<td>&gt;543Q</td>
<td>Neither War Nor Peace: The World Since 1945. (3). General education further studies course.</td>
</tr>
<tr>
<td>&gt;551</td>
<td>History of Mexico. (3). General education further studies course. Pre-Columbian Mesoamerica; the Spanish conquest and the colonial period; the independence movement; Juarez, the Reform and the French intervention; the Porfirato; the Mexican Revolution; Mexico in recent years.</td>
</tr>
<tr>
<td>&gt;555</td>
<td>The Ancient Near East. (3). General education further studies course. Political and cultural history of ancient Mesopotamia, Iran, Egypt, Palestine, Syria, and Asia Minor to the death of Alexander the Great.</td>
</tr>
<tr>
<td>&gt;557Q &amp; &gt;560</td>
<td>Greek History. (3 &amp; 3). General education further studies courses. 557Q: the Hellenic world from prehistoric times to the end of the Peloponnesian War. 560: the 4th century and the Hellenistic period.</td>
</tr>
<tr>
<td>&gt;562 &amp; &gt;563</td>
<td>Roman History. (3 &amp; 3). General education further studies courses. 562: the Roman Republic. 563: the Roman Empire.</td>
</tr>
<tr>
<td>&gt;566 &amp; &gt;567</td>
<td>Medieval History. (3 &amp; 3). General education further studies 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.</td>
</tr>
<tr>
<td>&gt;568</td>
<td>Social, Economic and Intellectual History of the Middle Ages. (3). Examines the 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.</td>
</tr>
<tr>
<td>&gt;575Q</td>
<td>The Italian Renaissance. (3). General education further studies course. Italian history from the 14th through the 16th centuries emphasizing cultural achievements.</td>
</tr>
<tr>
<td>&gt;576</td>
<td>The Reformation. (3). General education further studies course. Cross-listed as Rel. 476. The great religious changes in the 16th century in the political, social and intellectual contexts.</td>
</tr>
<tr>
<td>&gt;581</td>
<td>Europe, 1615-1870. (3). General education further studies course.</td>
</tr>
<tr>
<td>&gt;582</td>
<td>Europe, 1870-1945. (3). General education further studies course. Surveys European history from 1870 to 1945.</td>
</tr>
<tr>
<td>&gt;583</td>
<td>Europe, 1945-Present. (3). General education further studies course. A survey of European history from 1945-present.</td>
</tr>
</tbody>
</table>
588. History of Early Russia. (3). Covers the social, political, and cultural history of Kievan and Muscovite Russia.

591. History of Imperial Russia. (3). A survey of the political, social, and cultural history of Imperial Russia.

592. History of the Soviet Union. (3). General education further studies course. A survey of Soviet history from the Bolshevik Revolution to the present.

593. Former Soviet Union. (3). General education further studies course. An examination of contemporary life in the former USSR: historical background, Marxist/Leninist ideology, industrial and agricultural economies, roles played by women, national minorities and dissidents in Soviet society, the press, literature and art, health care, and prospects for the country's future.

613. European Diplomatic History. (3). General education further studies course. European international politics and diplomatic practices, emphasizing the actions of the great powers and their statesmen. Versailles settlement, totalitarian aggression, appeasement, World War II, the cold war and decolonization of Southeast Asia and the Middle East as prelude to major power involvement.

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

615. Hitler and the Third Reich. (3). The establishment and collapse of the Weimar Republic, the rise and fall of Hitler's Third Reich, the divided Germany of the present and the role of each in world affairs, 1914 to the present.

616. Germans and Jews. (3). The history of antisemitism in central Europe, 19th and 20th centuries.

620. Media Courses in History. (2-3). Courses created or coordinated by the Department of History, offered through various media: radio, television and newspaper. Areas of historical emphasis vary. Repeatable with instructor's approval; however, three hours maximum credit will apply towards MA degree in history.

695. Historiography. (3). Review of the major schools of historical thought, philosophies of history and eminent historians from the ancient world to the present. Required of history majors.

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.

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.

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.

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 way they reach audiences. Students learn to discern various components of historical texts to use in the design of interpretation materials on their own. Prerequisite: Hist. 701 or instructor's consent.

705. Introduction to Archives. (3). Introduce the basic knowledge, theory and related skills of archival administration, including the nature of information, records and archival documentation; the roles of archives in modern society; and issues and relationships that affect archival functions. Learn the theory and skills necessary to understand and apply basic archival functions. Prerequisite: Graduate standing and/or instructor's consent.

725. Advanced Historical Method. (3). Reviews basic historical research methods, the general character of field bibliographies and recent interpretations and the techniques of professional narrative development. Required of graduate degree students during their first year of enrollment. Prerequisite: departmental consent.

727. Readings in History. (3). Readings in ancient, medieval, modern, European and American field bibliographies. Repeatable for credit. Prerequisite: departmental consent.

729. Seminar in American History. (3). Repeatable for credit. Prerequisite: departmental consent.

730. Seminar in American History. (3). Repeatable for credit. Prerequisite: departmental consent.

731. Seminar in European History. (3). Repeatable for credit. Prerequisite: departmental consent.

734. Seminar in European History. (3). Repeatable for credit. Prerequisite: departmental consent.

750. Workshop in History. (1-3). Repeatable for credit but does not satisfy requirements for history majors.

781. Cooperative Education in History. (0-2). Graduate history students participate in internship experiences funded through the Cooperative Education programs. Augments Hist. 803. Prerequisite: instructor's consent.

Courses for Graduate Students Only


802. Thesis. (2).

803. Internship in Public History. (1-2). 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.

810. Special Topics in History. (1-3). Open only to graduate students. Repeatable for credit to a maximum of six hours.

865. State and Local Government Finance. (3). Cross-listed as Econ. 865 and P. Adm. 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.

Interdisciplinary Liberal Arts and Sciences Program

Lower-Division Courses

101. Regents Honors Academy 1. (3). Course material, the content of which is derived from Liberal Arts and Sciences and provides an interdisciplinary focus, is specifically designed for Kansas Regents Honors Academy. Prerequisite: restricted to members of the Kansas Regents Honors Academy.

102. Regents Honors Academy 2. (3). Course material, the content of which is derived from Liberal Arts and Sciences and provides an interdisciplinary focus, is specifically designed for Kansas Regents Honors Academy. Prerequisite: restricted to members of the Kansas Regents Honors Academy.

190. Inquiry in Liberal Arts and Sciences. (3). Introduces the liberal arts and sciences as the foundation of the university education. Taught by faculty from the humanities, social sciences, and natural sciences. Topics of general interest from various disciplinary perspectives and ways of knowing. Students gain insights which may guide them towards majors, areas of concentration, and their own pursuit of understanding.

222Q. East Asia. (3). General education issues and perspectives course. Cross-listed as Hist. 222, Pol. S. 222 and Rel. 222Q. A survey of basic topics on China, Korea and Japan, covering the period from 5000 B.C. to the present, including geography, prehistory, history, culture, anthropology, society, philosophy, religion, politics and the economics of each country. Taught by a team of instructors from several departments.

281. Cooperative Education. (1-4). Provides employment opportunities or approves current employment, when appropriate, to integrate academic theory with planned professional experience. Individualized programs must be formulated in consultation with and approved by appropriate faculty sponsors. May be repeated. Offered Cr/NCr only.
Upper-Division Courses

- 300G. Peace and War: Global Issues. (3). General education issues and perspectives course. An introduction to the study of conditions which have led to war or peace in the past and which may do so now in a nuclear age. Presents diverse views on worldwide issues from the perspectives of the natural and social sciences, the arts and humanities and applied studies.

390. Liberal Arts and Sciences: Issues and Perspectives. (3). Offers an opportunity to consider personal, intellectual, and social issues and perspectives engaging in interdisciplinary strategies employed by a team of collaborating faculty from the humanities, social sciences, and natural sciences. Prerequisites: completion of basic skills courses and at least three introductory courses from fine arts, humanities, social and behavioral sciences, and natural sciences included in the General Education Program. This Issues and Perspectives course can be applied to any of the disciplines of the humanities, social sciences, and natural sciences.

399. Travel Seminar. (1-4). An interdisciplinary travel seminar which allows a student traveling abroad to gain credit for the study of culture; art; literature; architecture; and political, social, scientific, and economic conditions while visiting historic places of interest. Students may enroll under the direction of a faculty member in any department in Fairmount College of Liberal Arts and Sciences.

480. National Student Exchange. (12-18). The National Student Exchange program encourages students to attend another university for a semester while retaining full-time student status and paying in-state tuition at WSU. All course work from the selected university will be transferred to Wichita State at the end of the exchange semester. At that time, the transfer courses will replace the WSU hours, with only the National Student Exchange designation remaining on the transcript. This enrollment designation documents the full-time status and the tuition payment of the student enrolled in the National Student Exchange program for the duration of the residence at the collaborating university. Repeatable for credit one time.


Courses for Graduate Students Only

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 program. To be taken during the first 12 hours of course work.

875. Thesis. (1-6). For students who are finishing the Master of Arts in Liberal Studies (MALS). 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.

885. Terminal Project. (2-6). For students who are near the end of their MALS program and involved in a terminal project. The terminal project may have many aspects such as field work, practice, internship research report, or any other individualized activity, but the scope of it must be approved by the student's advisory committee. The student involved in a project must be enrolled in this course until the project is completed and all project requirements have been satisfied.

Latin

See Modern and Classical Languages and Literatures.

Linguistics

The Bachelor of Arts degree in linguistics was phased out beginning in 1987; however, students presently enrolled in the program will be accommodated. An emphasis in linguistics is available through the general studies program or a Bachelor of Arts degree major plan. Minor. A minor in linguistics consists of 15 hours from the following courses. At least six hours must be taken from Group A.

Note. Courses applied toward another major or minor will not apply toward a major or minor in linguistics.

Group A—Basic Linguistic Theory

Lower-Division Course

- 151G. The Nature of Language. (3). General education introductory course. An overview of the important facts about what language is and how it works and of the ways in which researchers in linguistics and in other disciplines, such as psychology, philosophy and anthropology, explain and make use of language.

Group B—Linguistic Study of Specific Languages or Language Groups

Courses for Graduate/Undergraduate Credit

667. Linguistics. English Syntax. (3). Cross-listed as Engl. 667 and Anthr. 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.

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.


682. Linguistics. Structure of a Selected Non-Indo-European Language. (3). Language offered depends on student demand and availability of staff. Course may be conducted as a field methods course and is repeatable for credit when different languages are offered. Prerequisite: Ling. 315.

Courses for Graduate/Undergraduate Credit


505. Russian. Russian Phonology. (2). Cross-listed as Russ. 505.


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.

635. French and Spanish. Introduction to Romance Linguistics. (3). Cross-listed as Frn. 635 and Span. 635.

Group C—Areas of Contact Between Linguistics and Other Disciplines

Upper-Division Courses

301. Philosophy. Language and Philosophy. (3). Cross-listed as Phil. 301.
304. CDS. Developmental Psycho­linguistics. (3). Cross-listed as CDS 304.

325. Philosophy. Formal Logic. (3). Cross-listed as Phil. 325.

Courses for Graduate/Undergraduate Credit


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 analyze interlanguage patterns and to design appropriate teaching units for class and language laboratory use.


Mathematics and Statistics

Mathematics

Mathematics is among the oldest disciplines. Throughout history, mathematics has spanned the spectrum from pure to applied areas. The ancient Greek mathematicians were interested in problems that ranged from properties of numbers to applications of mathematics to music and astronomy. The Department of Mathematics and Statistics fulfills its mission by offering a broad and representative collection of courses to give students the ability to select, with their advisor, a program that fits their needs and goals. The Department of Mathematics and Statistics offers bachelor (BA and BS), master's (MS), and doctoral (PhD) degrees.

Note: For ease of description, certain courses in mathematics and statistics are categorized in the following groups (the courses in Group R are required of all majors):

Group R: Math. 415, 511, 547, 551, 555
Group A: Math. 513, 615, 621, 690, 720, 725
Group B: Stat. 460, 571, 572, 574, 576, 761, 762, 763, 771, 772, 775, 776
Group C: Math. 530, 545, 553, 640, 657, 714, 751, 753, 755.

Major. For the Bachelor of Arts (BA) degree with a major in mathematics, students must complete all courses in Group R plus Math. 531 and two additional courses from those listed in Groups A, B, and C.

For the Bachelor of Science (BS) degree in mathematics, students must complete all courses in Group R and one each from Groups A, B, and C. In addition, the BS candidate must complete two additional courses from those listed in Groups B and/or C.

For the Bachelor of Science (BS) degree in mathematics with emphasis in statistics, students must complete all courses in Group R, one course in Group A, and one course in Group C. In addition, the BS candidate must complete 12 additional hours of courses in Group B which must include either Stat. 571-572 or Stat. 771-772, plus one more course from Groups B or C. Students under this option may select statistics courses from other departments with the due approval of the Department of Mathematics and Statistics.

For students who are contemplating graduate study it is highly recommended that they include Math. 513, 547, and 640 in their program, along with courses in one or more of French, German, or Russian.

Students majoring in mathematics should consult closely with their mathematics advisor on any of these programs.

Minor. For a minor in mathematics, students must complete the calculus course approved by both the Department of Mathematics and Statistics and the student's major department.

*All bachelor degrees in mathematics require a high-level algorithmic computer language such as FORTRAN or Pascal.

Noncredit Courses

007. Arithmetic. (3). Offered Cr/NCr only. A review and study of the basic arithmetic operations for the mature student whose previous training in arithmetic is inadequate for completion of college mathematics courses.

011. Beginning Algebra. (5). Offered Cr/NCr only. Content consists of algebra topics usually covered in the first year of a standard high school algebra course. Not applicable to degree.

012. Intermediate Algebra. (5). Offered Cr/NCr only. Content consists of topics usually covered in the second year of a standard high school algebra course. Prerequisite: Math. 011 or one year of high school Algebra, and qualifying score in recent department placement exam. Not applicable to degree.


021. Plane Geometry. (3). Offered Cr/NCr only. For students without high school credit in plane geometry. Course may be used to meet departmental prerequisites in place of one unit of high school geometry. Prerequisite: one unit of high school algebra, Math. 011 or concurrent enrollment in Math. 011. Not applicable to degree.

Lower-Division Courses

090. Mathematics. Special Studies. (2-3). Topic selected and announced by individual instructor. Credit is assigned to Group A, B or C depending on content. Repeatable for credit when content varies.

Courses for Graduate/Undergraduate Credit

590. Linguistics. Special Studies. (2-3). Topic selected and announced by individual instructor. Credit is assigned to Group A, B or C depending on content. Repeatable for credit when content varies.


101Q. Mathematics Appreciation. (3). Elementary topics in mathematics of interest to persons in other fields. Especially for persons majoring in nontechnical fields. No credit toward a major or minor in mathematics.

111. College Algebra. (3). General education basic skills course. A survey of functions, theory of equations and inequalities, complex numbers and exponential and logarithmic functions. High school geometry or Math. 021 is a highly-recommended preparatory course. Prerequisites: Math. 012 or two years of high school algebra and qualifying score in recent department placement exam. Credit is allowed in only one of the two courses Math. 111 and Math. 112.

112. Precalculus Mathematics. (5). General education basic skills course. Functions, theory of equations and inequalities, complex numbers and exponential and logarithmic functions and other standard topics prerequisite to a beginning study of calculus. Course is not available for credit to students who have received a grade of C or better in Math. 242Q or its equivalent. Prerequisites: Math. 012 or two years of high school algebra, one unit of high school geometry and qualifying score in recent departmental placement exam. Credit is allowed only in one of the two courses Math. 111 and 112.

123. College Trigonometry. (3). Studies the trigonometric functions and their applications. Credit in both Math. 123 and 112 is not allowed. Prerequisite: Math. 111 with C or better or equivalent high school preparation, and one unit of high school geometry or Math. 021.

131. Contemporary Mathematics. (3). General education basic skills course for students majoring in nontechnical areas. A collection of applications of mathematics illustrating how contemporary mathematical thinking is used
in the decision-making process. Covers topics selected from such areas as the mathematics of social choice; management science; statistics; coding information; and the geometry of growth, shape, and symmetry. Prerequisite: Math. 012 or two years of high school algebra and a qualifying score on a recent departmental placement examination.

>144. Business Calculus. (3). General education introductory course. A brief but careful introduction to calculus for students of business and economics. Credit in both Math. 144 and 242Q is not allowed. Prerequisite: Math. 111 or 112 with a grade of C or better or equivalent high school preparation.

150. Workshop in Mathematics. (1-3). Topics of interest to particular students and not elsewhere available in the curriculum. May be repeated for a total of six hours credit with departmental consent. Prerequisite: departmental consent.

211. Elementary Linear Algebra. (3). Covers topics in linear algebra together with elementary applications. Prerequisite: one and one-half units of high school algebra or Math. 011.

>242Q. Calculus I. (5). General education introductory course. Analytic geometry and the calculus in an interrelated form. Credit in both Math. 242Q and 144 is not allowed. Prerequisites: Math. 112 with a grade of C or better or two units of high school algebra, and one unit of high school geometry and one-half unit of high school trigonometry, or Math. 123 and 111 with a grade of C or better in each.

>243. Calculus II (5). General education further studies course. A continuation of Math. 242Q. Includes a study of integration and applications and an introduction to infinite series. Prerequisite: Math. 242Q with a grade of C or better.

Upper-Division Courses

300C. The Evolution of Mathematics. (3). A study of mathematics and mathematicians from antiquity to the present; to see how mathematics has developed from man's efforts to understand the world and the extent to which mathematics has molded our civilization and culture. Since mathematics is what mathematicians do, the lives of mathematicians from various ages and countries are studied. Not a mathematical skills course.

311. Introduction to Linear Algebra. (1). A study of systems of linear equations, matrices, vectors, eigenvalues and eigenvectors. Credit not allowed in both Math. 211 and 311. Prerequisite: Math. 344 or concurrent enrollment.

331D. Discrete Mathematics I. (3). A study of some of the basic topics of discrete mathematics, including elementary logic, properties of sets, mathematical induction, counting problems using permutations and combinations, trees, elementary probability and an introduction to graph theory. Prerequisite: Math. 111 or 211 or equivalent college-level mathematics course.


350. Modeling with Differential Equations. (3). Covers first order equations (linear and separable), linear equations with constant coefficients, the Laplace transform, numerical methods of solution, and several physical and biological applications. Not intended for students in engineering or the sciences. Prerequisite: Math. 243 with a grade of C or better.

415. An Introduction to Advanced Mathematics. (3). Develops the concept of proof in a setting of mathematical tools needed in advanced courses. Covers topics in number theory, algebra and analysis. Particular attention to equivalence relations, functions, induction and mathematical systems. Prerequisite: Math. 244 with a grade of C or better.

480. Individual Projects. (1-5). Repeatable up to ten hours. Prerequisite: departmental consent.

Courses for Graduate/Undergraduate Credit

Credit in courses numbered below 600 is not applicable toward the MS in mathematics.

501. Elementary Mathematics. (5). A study of topics necessary to an understanding of the elementary school curriculum, such as set theory, real numbers and geometry. Not for major or minor credit. Prerequisites: elementary education major and Math. 111 or equivalent with a grade of C or better or departmental consent.

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 grade of C or better.

513. Fundamental Concepts of Algebra. (3). Defines group, ring and field and studies their properties. Prerequisites: Math. 415 and 511 with a grade of C or better or departmental consent.

530. Applied Combinatorics. (3). Basic counting principles, occupancy problems, generating functions, recurrence relations, principles of inclusion and exclusion, the pigeonhole principle, Fibonacci sequences and elements of graph theory. Prerequisite: Math. 344 with a grade of C or better.

>531. Introduction to the History of Mathematics. (3). General education issues and perspectives course. Studies the development of mathematics from antiquity to modern times. Covers problems using the methods of historical period in which they arose. Requires mathematical skills. Prerequisites: Math. 511 and two additional courses at the 500 level or above, with C or better in each.

>535. Integration Techniques and Applications. (3). A study of 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 grade of C or better.

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.

551. Numerical Methods. (3). Approximating roots of equations, interpolation and approximation, numerical differentiation and integration and the numerical solution of first order ordinary differential equations. Some computer use. Prerequisites: Math. 344 with a grade of C or better and a knowledge of FORTRAN, or departmental consent.

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.

555. Ordinary Differential Equations with Linear Algebra. (4). Includes separation of variables, integrating factors, variation of parameters, undetermined coefficients, Laplace transforms, power series substitution, linear algebra, eigenvalue problems, and linear systems. Credit not allowed in both Math. 550 and 555. Prerequisite: Math. 243 with grade of C or better or departmental consent.

580. Selected Topics in Mathematics. (3). Topic chosen from topics not otherwise represented in the curriculum. May be repeated up to a maximum of six hours credit with departmental consent. Prerequisite: departmental consent.

615. Elementary Number Theory. (3). Studies properties of the integers by elementary means. Prerequisite Math. 344 with C or better or departmental consent.

621. Elementary Geometry. (3). Studies Euclidean geometry from an advanced point of view. Prerequisite: Math. 344 with C or better or departmental consent.

640. Advanced Calculus II. (3). A continuation of Math. 547. Prerequisites: Math. 511 and 547 with a grade of C or better in each.

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.

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.

713. Abstract Algebra I. (3). Treats the standard basic topics of abstract algebra. Prerequisite: Math. 513 with C or better or departmental consent.

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. 550 or instructor's consent.

720. Modern Geometry. (3). Examines the fundamental concepts of geometry. Prerequisite: Math. 513 with C or better or departmental consent.

725. Topology I. (3). Studies the results of point set and algebraic topology. Prerequisite: Math. 547 with C or better or departmental consent.

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.

745. Complex Analysis I. (3). Studies the theory of analytic functions. Prerequisite: Math. 640 with C or better, or departmental consent.

750. Workshop. (1-3). Topics appropriate for mathematics workshops that are not in current mathematics courses. May be repeated to a total of six hours credit with departmental consent. Prerequisite: departmental consent.

751. Numerical Linear Algebra. (3). Includes analysis of direct and iterative methods for the solution of linear systems, least squares problems, eigenvalue problems, error analysis and reduction by orthogonal transformations. Prerequisite: Math. 511, 547 and 551 with C or better in each, or departmental consent.

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.

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.

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. 550 or 555 with C or better.

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. No credit for this course toward a graduate degree in mathematics. Prerequisite: Math. 550 or 555 with grade of C or better.

Courses for Graduate Students Only

813. Abstract Algebra II. (3). A continuation of Math. 713. Prerequisite: Math. 713 or equivalent.

818. Selected Topics in Number Theory. (2-3). Repeatable with departmental consent. Prerequisite: departmental consent.

825. Topology II. (3). A continuation of Math. 725. Prerequisite: Math. 723 or equivalent.

828. Selected Topics in Topology. (2-3). Repeatable with departmental consent. Prerequisite: departmental consent.

829. Selected Topics in Geometry. (2-3). Repeatable with departmental consent. Prerequisite: departmental consent.

839. Selected Topics in Foundations of Mathematics. (2-3). Repeatable with departmental consent. Prerequisite: departmental consent.

843. Real Analysis II. (3). A continuation of Math. 743. Prerequisite: Math. 743 or equivalent.

845. Complex Analysis II. (3). A continuation of Math. 745. Prerequisite: Math. 745 or equivalent.

848. Calculus of Variations. (3). Includes Euler-Lagrange equations, variational methods and applications to extremal problems in continuum mechanics. Prerequisite: Math. 547 or 757.

849. Selected Topics in Analysis. (2-3). Repeatable with departmental consent. Prerequisite: departmental consent.


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.


857-858. Selected Topics in Engineering Mathematics I and II. (3-3). Advanced topics in mathematics of interest to engineering students, including tensor analysis, calculus of variations and partial differential equations. Not applicable toward the MS in mathematics.

859. Selected Topics in Applied Mathematics. (2-3). Repeatable with departmental consent.

880. Seminar. (1). Oral presentation of research in areas of interest to the students. Prerequisite: major standing.

881. Individual Reading. (1-5). Prerequisite: departmental consent. Repeatable to a maximum of six hours with departmental consent.

885. Thesis. (1-4). May be repeated to a maximum of six hours credit. Prerequisite: departmental consent.


952. Advanced Topics in Numerical Analysis. (3). Advanced topics of current research interest in numerical analysis. Topics chosen at instructor's discretion. Possible areas of concentration are numerical methods in ordinary differential equations, partial differential equations and linear algebra. Prerequisites: Math. 751, 851 and instructor's consent.

958 & 959. Selected Advanced Topics in Applied Mathematics. (3 & 3). Topics of current research interest in applied mathematics. Repeatable for credit with departmental consent. Prerequisite: instructor's consent.

981. Advanced Independent Study in Applied Mathematics. (1-3). Arranged individually directed study in an area of applied mathematics. Repeatable to a maximum of six hours. Prerequisite: must have passed the PhD qualifying exam and instructor's consent.

985. PhD Dissertation. (1-9). Repeatable to a maximum of 24 hours. Prerequisite: must have passed the PhD preliminary exam.

Statistics

No major or minor in statistics is available, but a BS degree with emphasis in statistics is offered as described under the mathematics section. Statistics courses satisfy general education requirements. As part of the 124 semester hours required for graduation, students may take up to 15 semester hours of statistics courses in addition to the 45 or 50 semester hours of course work allowed in mathematics.

Lower-Division Course

170Q. Statistics Appreciation. (3). A non-technical course stressing and explaining how statistics and probability help solve important problems in a variety of fields (e.g., biology, economics, education, government, health sciences, social sciences, etc.). The material is developed by examples rather than by traditional statistical methods and does not require any special knowledge of mathematics.
Upper-Division Courses

360Q. Elementary Probability. (3). Includes probability functions, random variables and expectation of finite sample spaces. Prerequisite: Math. 111 with C or better or equivalent.

370. Elementary Statistics. (3). General education introductory course. Surveys elementary descriptive statistics, binomial and normal distributions, elementary problems of statistical inference, linear correlation and regression. Not open to mathematics majors. Prerequisite: Math. 111 with C or better or equivalent.

460. Elementary Probability and Mathematical Statistics. (3). General education further studies course. Covers elementary probability concepts, some useful discrete and continuous distributions and mathematical aspects of statistical inference including maximum likelihood estimation, confidence intervals, hypothesis testing and regression. Prerequisite: Math. 243 with grade of C or better.

471. Probabilistic Models and Statistical Methods. (3). General education further studies course. Covers axioms of Probability, Bayes' Theorem, random variables and their distributions, joint distributions of random variables and transformations of random variables, moment generating function, characteristic functions, central limit theorem and other topics with applications to engineering. Prerequisite: Math. 344 with a grade of C or better.

Courses for Graduate/Undergraduate Credit

Credit in courses numbered below 600 is not applicable toward the MS in mathematics.

570. Special Topics in Statistics. (3). Covers topics of interest not otherwise available. Prerequisite: departmental consent.

571-572. Statistical Methods I and II. (3-3). General education further studies course. Includes probability models, point and interval estimates, statistical tests of hypotheses, correlation and regression analysis, introduction to many elementary statistics course topics. Prerequisite: Math. 243 with C or better or departmental consent.

574. Elementary Survey Sampling. (3). Reviews basic statistical concepts. Covers simple, random, stratified, cluster and systematic sampling, along with selection of sample size, ratio, estimation and costs. Applications studied include problems from the social and natural sciences, business and other disciplines. Prerequisite: any elementary course in statistics, such as Stat. 370, Soc. 501 or Psy. 401 with a C or better.

576. Applied Nonparametric Statistical Methods. (3). Studies assumptions and needs for nonparametric tests, rank tests and other nonparametric inferential techniques. Applications involve problems from the social and natural sciences, business and other disciplines. Prerequisite: any elementary statistics course such as Stat. 370, Soc. 501 or Psy. 401 with C or better.

761. Probability. (3). A study of axioms of probability, discrete and continuous random variables, expectation, examples of distribution functions, moment generating functions and sequences of random variables. Prerequisite: Math. 344 with a grade of C or better.

762. Applied Stochastic Processes. (3). Studies random variables, expectation, limit theorems, Markov chains and stochastic processes. Prerequisite: Stat. 761 or 771 with C or better or departmental consent.

763. Applied Regression Analysis. (3). Studies linear, polynomial and multiple regression. Includes applications to business and economics, behavioral and biological sciences, and engineering. Uses computer packages for doing problems. Prerequisites: Stat. 571 and Math. 344 and 511 with C or better in each or departmental consent.

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 in each or departmental consent.

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 grade of C or better or departmental consent.

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 the most commercially statistical packages. Students perform complete statistical analyses of real data sets. Prerequisites: Stat. 763 and 764 or departmental consent.

775. Applied Statistical Methods I. (3). Covers selected topics from time series analysis including basic characteristics of time series, autocorrelation, stationarity, spectral analysis, linear filtering, ARIMA models, Box-Jenkins forecasting and model identification, classification and pattern recognition. Prerequisite: Stat. 763 with a grade of C or better or departmental consent.

776. Applied Statistical Methods II. (3). Covers selected topics from multivariate analysis including statistical theory associated with the multivariate normal, Wishart and other related distributions, partial and multiple correlation, principal component analysis, factor analysis, classification and discriminant analysis, cluster analysis, James-Stein estimates, multivariate probability inequalities, majorization and Schur functions. Prerequisite: Stat. 764 with a grade of C or better or departmental consent.

Courses for Graduate Students Only

861. Theory of Probability. (3). The axiomatic foundations of probability theory emphasize the coverage of probability measures, distribution functions, characteristic functions, random variables, modes of convergence, the law of large numbers and central limit theorem, and conditioning and the Markov property. Prerequisites: Math. 743 and Stat. 761 or 771.


875. Design of Experiments. (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.

876. Nonparametric Methods. (3). An introduction to the theory of nonparametric statistics. Includes order statistics; tests based on runs; tests of goodness of fit; rank-order statistics; one-, two- and k-sample problems; linear rank statistics; measure of association for bivariate samples; and asymptotic efficiency. Prerequisite: Stat. 772.


878. Special Topics. (2-3). Repeatable with departmental consent. Prerequisite: departmental consent.

879. Individual Reading. (1-5). Prerequisite: departmental consent.

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 general techniques. Prerequisites: Math. 751 and Stat. 772 with C or better or departmental consent.

971 & 972. Selected Advanced Topics in Probability and Statistics. (3 & 3). Topics of current research interest in probability and statistics. Repeatable for credit with departmental consent. Prerequisite: instructor's consent.
978. Advanced Independent Study in Probability and Statistics. (1-3). Arranged individual directed study in an area of probability or statistics. Repeatable to a maximum of 6 hours. Prerequisites: must have passed the PhD qualifying exam and instructor’s consent.

986. PhD Dissertation. (1-9). Repeatable to a maximum of 24 hours. Prerequisite: must have passed the PhD preliminary exam.

Minority Studies
See Urban and Public Affairs, Hugo Wall School of.

Modern and Classical Languages and Literatures
The Department of Modern and Classical Languages and Literatures works to instill in students an awareness and appreciation of other languages and cultures. The department grants the Bachelor of Arts degree in French, German, Latin, and Spanish, as well as minors in Greek and Russian; the Bachelor of Arts in Secondary Education with a major in French, German, Latin, and Spanish; the Master of Arts in Spanish; and the Master of Arts in Liberal Studies with area concentrations in French, German, Greek, Latin, Russian, or Spanish.

A wide range of courses in language, literature, civilization, translation, and linguistics is offered on campus as well as in summer programs in Puebla, Mexico, and Strasbourg, France.

Graduate students in Spanish interested in applying for teaching assistantships and graduate research assistantships should consult with the graduate coordinator.

Study Abroad. Wichita State University has a special exchange program with Wichita’s French sister city, Orléans, and with the University of Strasbourg. Through these programs, students pay their tuition and fees at WSU and do academic work in their chosen field at the French institutions. Students receive direct credit at WSU for all credit earned in Orléans, Puebla, and Strasbourg.

Scholarships. Various scholarships are available for study in French, German, Latin, and Spanish, including Puebla, Mexico, and Strasbourg, France.

Retroactive Credit Policy
Qualified students may earn college credit for previous language experience by successfully completing a language course, or courses, at the appropriate level.

Based on their previous experience, students enroll at their predicted level. Normally, predicted entry level is calculated by assuming that one year of high school language is equivalent to one semester of college language.

Students must apply for retroactive credit during the semester in which they are enrolled in the retroactive credit eligible course(s). Deadline for application will be announced in all language classes.

If a student successfully completes the course, or courses (with a grade of C or better), the student receives the graded credit hours for that course, or courses, and the appropriate number of ungraded retroactive credit hours.

French
Major. A major in French consists of a minimum of 33 semester hours beyond Fren. 112 or its equivalent, and must include the following courses: Fren. 220, 223, 227, 300, 526, 551, or 552 or equivalents. In addition, 15 hours must be selected from courses numbered above 500. No fewer than nine hours must be literature.

Related Fields. In addition to the above courses, it is strongly recommended that French majors take courses in related fields such as other foreign languages, art history, English, history, and philosophy.

Student Teachers. Students who plan to teach French should consult with the department’s professor in charge of teacher education early in their college careers. In addition to the major requirements, it is recommended that future teachers take courses beyond the general education requirements in other foreign languages, history, art history, English, or philosophy. It is also recommended that future French teachers spend at least a summer in a French-speaking country before student teaching.

Requirements for entering this program are:
1. Grade point average of 3.000 or higher in French
2. Special departmental approval based on demonstrated proficiency in the use of both oral and written French (not based on course grades)
3. Basic courses in education required by the Teacher Education Program (see College of Education).

Minor. A minor in French consists of a minimum of 12 semester hours beyond Fren. 112 and must include Fren. 220, 223, 300, and one upper-division French course numbered 500 or above.

Native Speakers. Native and near native speakers of French are not permitted to take courses at the 100 or 200 level but must take a minimum of 12 upper-division semester hours in order to complete a major in French. These students are advised to consult with a French professor before enrolling in French courses.

High School French. Students who have completed more than two units of high school French should consult with an advisor in the French department before enrolling in French courses.

Lower-Division Courses
111-112. Elementary French. (5-5). An introductory course emphasizing speaking, reading, writing, and grammar essentials. Requires daily classroom and laboratory work.

150. Workshop in French. (2-4). Repeatable for credit.

210Q. Intermediate French. (5). General education introductory course. French review emphasizing conversation, folklore, and modern culture. Prerequisite: two units of high school French or Fren. 112 or departmental consent.

215. Study Abroad. (3-6). Transfer of credit from a French-speaking university in (a) grammar, (b) conversation, (c) reading.

220. Intermediate French Grammar and Composition. (3). A review of elementary French grammar designed to improve proficiency in written expression by use of various tenses and turns of phrase in compositions assigned on a regular basis. Prerequisite: Fren. 112 or departmental consent.

222. Intermediate French Readings I. (3). General education further studies course. Intensive reading of French literary works of the modern period. Course may be used to meet the LAS literature requirement. Prerequisite: Fren. 112 or equivalent.

227. French Conversation. (1-3). Assignments to increase oral fluency. Emphasizes learning new vocabulary and idiomatic structures. Exercises in the language laboratory. Prerequisite: Fren. 112 or equivalent.

Upper-Division Courses
300. Intermediate French Readings II. (3). General education further studies course. Intensive reading and analysis of French literary works of all periods. Course may be used to meet the LAS literature requirement. Prerequisite: Fren. 223 or equivalent.

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 general education literature requirement.

505. French Phonetics. (3). 2R: 1L. Cross-listed as Ling. 505. Corrective phonetics for non-native speakers of French. Includes articulatory phonetics, phonology, phonemics, sound/
symbol correspondences, dialectical and stylistic variations. Required for future French teachers. Prerequisites: Fren. 227 or 220 or equivalent.

515. Major Topics. (1-4). Special studies in (a) language, (b) literature, (c) commercial French, (d) the language laboratory, (e) music, (f) composition, (g) problems in teaching French, (h) civilization, (i) translation, (k) conversation and (m) phonetics. Repeatable for credit. Prerequisite: departmental consent.

525. Advanced Conversation. (3). Designed to increase proficiency in spoken French. Assignments include oral reports, dialogues, and work in the language laboratory. Prerequisite: Fren. 227 and either 220 or 223, or departmental consent.

526. Advanced Composition and Grammar. (3). Emphasizes theme writing, original compositions and detailed study of modern French grammar. Prerequisite: Fren. 220 or departmental consent.

540Q. French Literature in English Translation. (3). Topic varies. May be used to satisfy the general education literature requirement and may count toward a French major or minor if readings and papers are done in French.

541Q. French literature of Africa and the Caribbean in English Translation. (3). 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 general education literature requirement and may count toward a French major or minor if readings and papers are done in French.

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 and history, social evolution and intellectual traditions. Course is interdisciplinary in nature and is designed to complement studies in French language and literature. Includes slide demonstrations, guest speakers on special topics and films. Most classes and required readings are in French. Prerequisite/corequisite: Fren. 300.

552. Contemporary French Civilization. (3). Emphasizes the major events, themes, ideas, trends and movements in French civilization since the Revolution. Course is interdisciplinary in nature and is designed to complement studies in French language and literature courses. Class work and readings are in French. Prerequisite/corequisite: Fren. 300.

623. Seminar in French. (3). Seminar in French literature, language or civilization. Prerequisite: Fren. 300. Repeatable for credit.


631. 17th Century French Literature. (3). Prerequisite: Fren. 300.

632. 18th Century French Literature. (3). Prerequisite: Fren. 300.


634. Contemporary French Literature. (3). Prerequisite: Fren. 300.

635. Introduction to Romance Linguistics. (3). Cross-listed as Span. 635 and Ling. 635. An introduction to the historical phonology and morphology of the romance languages emphasizing French and Spanish. Prerequisite: departmental consent.

636. 20th Century French Literature. Reading and discussion of major works of French fiction, poetry and drama from 1900 to 1960. Prerequisite: Fren. 300.

726. Composition and Stylistics. (3). Offers background in rhetoric and stylistics as an approach to literary models, with a view to developing the creative use of style together with grammatical accuracy in writing. Practice in revising form: the basis of this course. Prerequisite: Fren. 526 or departmental consent.

750. Workshop in French. (2-4). Repeatable for credit.

Course for Graduate Students Only

815. Special Studies in French. (3). Prerequisite: departmental consent. Repeatable for credit.

German

Major A. A major in German consists of a minimum of 24 hours beyond the level of Germ. 112. Students may select an emphasis in literature or in language as described below.

The literature emphasis is recommended for students whose concerns are primarily in the humanities or who anticipate graduate study in literature. Students must take Germ. 324, 341 or 441Q, 524, Engl. 315, and at least six hours in Germ. 650.

The language emphasis is suggested for students whose objectives are in teaching (see Major B), linguistics, or in the application of language skills in support of other professional pursuits. Students must take Germ. 301, 324, 341 or 441Q, 524, and Engl. 315.

Native speakers of German are not normally permitted to enroll in 100- and 200-level German courses or to receive credit in such courses by advanced standing examination. A minimum of 18 hours in upper-division courses, including Germ. 524 and Engl. 315, is normally required for a native speaker to earn a German major. Native speakers of German should consult with the department before enrolling in German courses.

Major B. The teaching major in German in either Fairmount College of Liberal Arts and Sciences or in the College of Education includes at least 24 hours in the language beyond the 112 level, as discussed earlier under Major A.

In addition to the major, it is recommended that future teachers take courses beyond the general education requirements in other foreign languages, history, art history, English, or philosophy.

Students who wish to enter the student teaching program should consult with the department's professor in charge of teacher education to qualify in their college careers. Requirements for entering the student teaching semester include:

1. Grade point average in German of 3.00 or above

2. Special departmental approval based on demonstrated competency in the use of both oral and written German (not based on course grades)

3. Basic courses in education required by the Teacher Education Program. (See College of Education.)

Minor. A minor in German consists of 11 hours beyond the 112 level. Students are permitted to count no more than one of the following for minor credit: Germ. 341 or 441Q.

Noncredit Course

010. German for Graduate Reading Examination. (3). A reading course; prepares students to fulfill departmental requirements of a reading knowledge of German for the master of arts or master of science. Requires no previous knowledge of German. Course does not count toward a degree. Offered Cr/NC only.

Lower-Division Courses

101. Beginning German. (3). An introductory course for acquiring practical skill in speaking and understanding everyday German as general information concerning German-speaking countries. Does not substitute for Germ. 111.

102. Beginning German II. (3). A continuation of Germ. 101. For acquiring practical skill in speaking and understanding everyday German as well as general information concerning contemporary German-speaking countries. Does not substitute for Germ. 112. Prerequisite: Germ. 101.


>220Q. Continuing German. (3). General education introductory course. Grammar review and cultural readings primarily for students meeting the foreign language graduation requirement of Fairmount College of Liberal Arts and Sciences. Recommended for all students with high school German and for transfer students with the college German equivalent to 112.
>223. Intermediate German I. (3). General education further studies course. Intensive reading and discussion of short works. Prerequisites: Germ. 112 with grade of C or better or departmental recommendation to transfer from Germ. 220Q.

225. German Conversation. (2). The development of oral fluency. Prerequisite: Germ. 220Q, 223, or concurrent enrollment in 223.

**Upper-Division Courses**

301. German Phonetics and Pronunciation. (3). A practical course to improve pronunciation of individual speech sounds as well as intonation and rhythm of sentences. Prerequisite: Germ. 112 or instructor's consent.

324. Intermediate Conversation and Composition. (2). Emphasizes development of written skills as conversational practice continues. Prerequisite: Germ. 225 or instructor's consent.

>341. German in the European Context. (3). General education issues and perspectives course. Selected topics on significant aspects of life and thought in Germany. Emphasizes the modern period with special attention to the interrelation of cultural trends in the European context. A knowledge of German is not required.

>344Q. Intermediate German II. (3). General education further studies course. Readings in German civilization accompanied by extensive studies of selected literary works. Prerequisite: Germ. 225 or equivalent.

441Q. Culture of Contemporary Germany. (3). Study of the culture and life in the Federal Republic of Germany and the German Democratic Republic from 1943 to 1989 and the unified Germany. A knowledge of German is not required. Does not count toward fulfillment of language requirement.

Courses for Graduate/Undergraduate Credit

524. Advanced Conversation and Composition. (3). Prerequisites: Germ. 324 or instructor's consent.

550. Directed Study. (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, 1945-1989; (e) special topics in literature, repeatable once for credit; (f) special topics in language, repeatable once for credit. Prerequisite: Germ. 344Q or instructor's consent.

726. Advanced Stylistics. (3). Offers advanced 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. Prerequisites: Germ. 524 or departmental consent.

750. Workshop in German. (2-4). Repeatable once for credit.

751. German Civilization since the Middle Ages. (3). Survey of German civilization from the Middle Ages to the present. Emphasizes the social, political, historical, and intellectual evolution of the German-speaking countries. Special attention paid to the foundation of the German Reich in 1871, World War I, the Weimar Republic, National Socialism and the Holocaust, the creation of the Federal Republic and the German Democratic Republic in 1949, and the unification process initiated in 1989. Prerequisites: Germ. 441Q or departmental consent.

752. German Literature from the Eighteenth Century to the Present. (3). The following offerings available: a) Genre Studies: novel, novella, prose, and poetry; b) Literary Movements: storm and stress, classicism, romanticism, realism, fin de siècle, expressionism, post-1945 literary trends; c) Major Authors: e.g. Goethe, Schiller, Rilke, Kafka, Boll, Grass, Wolf; d) Special Topics: intellectual life in Weimar Germany, literature and exile, literature and film, writers in East and West Germany: Two Literatures? Prerequisites: Germ. 650 or departmental consent.

**Course for Graduate Students Only**

815. Special Studies in German. (3). Readings in German literature or culture. May be repeated for credit when the topic changes. Prerequisite: graduate standing or departmental consent.

**Greek (Ancient Classical)**

There is no major in Greek. A minor consists of 11 hours beyond the 111-112 level.

**Lower-Division Course**

111. Elementary Greek. (5). Presents the basic grammar of Ancient Classical Greek, and emphasizes early reading.

112. Elementary Greek. (5). Continues the presentation of the basic grammar of Ancient Classical Greek, and emphasizes early reading.

>223. Intermediate Greek. (3). General education introductory course. Completes the presentation of basic grammar of Ancient Classical Greek, and proceeds to the study of selections from the writings of Plato and Herodotus. Prerequisite: Greek 112 or equivalent.

>224. Intermediate Greek. (3). General education further studies course. Homer's Iliad. Prerequisite: Greek 223.

Courses for Graduate/Undergraduate Credit

515. Special Studies. (1-4). Topic announced by instructor. Repeatable for credit. Prerequisite: Greek 224 or instructor's consent.

531. Advanced Greek. (3). Sophocles and Euripides. Prerequisite: Greek 224.

532. Advanced Greek. (3). Thucydides. Prerequisite: Greek 531.

**Latin**

Major A. A major in Latin consists of a minimum of 24 hours beyond Latin 112 or its equivalent, and must include at least nine hours of upper-division courses. Courses in Greek, ancient history, Greek philosophy, or ancient art are strongly recommended for all majors.

Major B. The teaching major in Latin in either Fairmount College of Liberal Arts and Sciences or in the College of Education includes at least 24 hours beyond Latin 111-112 as listed under Major A, plus the basic courses required by the Teacher Education Program.

In addition to the major, it is recommended that future teachers take courses beyond the general education requirements in other foreign languages, history, art history, English, or philosophy.

Students who wish to enter the student teaching program should consult with the department's professor in charge of teacher education early in their college careers. Requirements for entering the student teaching semester are:

1. Grade point average of 3.00 or higher in Latin
2. Special departmental approval based on demonstrated competencies in the use of Latin (not based on course grades)

Minor. A minor in Latin consists of a minimum of 11 hours beyond the 112 level and must include at least one 500 level course.

**Lower-Division Courses**


150. Workshop in Latin. (2-4). Repeatable for credit.

>223. Intermediate Latin. (3). General education introductory course. General review of grammar with selected readings of prose and poetry. Prerequisite: Latin 112, two years of high school Latin or departmental consent.

>224. Intermediate Latin. (3). General education further studies course. Selected readings of prose and poetry. May be repeated for credit when the readings vary. Prerequisite: Latin 223 or departmental consent.

Courses for Graduate/Undergraduate Credit

Latin 224 or departmental consent is the prerequisite for all upper-division courses.

541. Roman Lyric Poetry. (3). The lyric poems of Catullus and Horace emphasizing imagery, symbolism, structure, diction and meter.

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. Gives consideration to the
place of the Aeneid in Augustan Rome and in the epic tradition.

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.

545. The Roman Novel. (3). Reading of the Satyricon of Petronius and the Golden Ass of Apuleius. The portions that are not read in Latin are read in English. Gives consideration to the development of the novel from its Greek beginnings up to the time of Apuleius and beyond.

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.


562. 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.

565. Lucretius and Epicureanism. (3). Reading of Lucretius' De Rerum Natura and study of Epicureanism, the atomic theory and Democritian materialism. Gives consideration to the place of Lucretius in Latin poetry.

750. Workshop in Latin. (2-4). Repeatable for credit.

**Russian**

There is no major in Russian. A minor in Russian consists of a minimum of 12 hours beyond the Russ. 111-112 level and must include at least one 300-level and one 500-level course.

**Lower-Division Courses**

110. Russian Studies. (3). Cross-listed as Hist. 110 and Pol. S. 110. Team-taught by faculty from history, political science, and modern and classical languages and literatures. Prepar

111. Elementary Russian. (3). A presentation of the sounds and structure of Russian to develop the four basic skills of understanding, speaking, reading and writing.

112. Elementary Russian. (5). A continuation of Russian 111 to complete the presentation of elementary Russian grammar and enhance the four basic skills. Prerequisite: Russ. 111 or equivalent.

>210Q. Intermediate Russian. (5). General education introductory course. Reading, gram-

mar review and audiovisual presentations in Russian to enhance listening comprehension, speaking, reading and basic writing skills. Prerequisite: Russ. 112 or equivalent.

>224. Intermediate Russian. (3). General education further studies course. A continuation of Russian 210Q; further enhancement of listening comprehension and speaking, reading and writing skills. Prerequisite: Russ. 210Q or instructor's consent.

225. Russian Conversation and Composition. (2). Development of oral and written skills. May be taken concurrently with Russian 224. Prerequisite: Russ. 112 or instructor's consent.

**Upper-Division Courses**

>300. Intermediate Russian Readings (3). General education further studies course. Intensive reading and analysis of Russian literary works of all periods. Prerequisite: Russian 224 or instructor's consent.

325. Intermediate Russian Conversation and Composition. (2). Continued development of speaking and listening skills, focusing on the vocabulary of everyday Russian life and idiomatic usage. Prerequisite: Russian 224 or 225 or instructor's consent.

**Courses for Graduate/Undergraduate Credit**

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 (intonationky konstruktsii). Prerequisite: any 200-level course or instructor's consent.

515. Special Studies. (1-3). Advanced reading and translation in Russian social sciences, literature, and civilization. Repeatable for credit. Prerequisite: departmental consent.

540Q. 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**

Major. A major in Spanish consists of a minimum of 30 semester hours beyond Span. 111-112. There are three available options for majors. Basic to all three are the following courses: Span. 220, 223, 225, 300, 325, 325, and 526, or equivalents.

Literature. In addition to the above courses, a major emphasizing Hispanic literature requires 12 hours of upper-division literature and/or linguistics.

Language and Civilization. In addition to the basic courses listed above, a major with an emphasis in language and civilization requires 12 hours selected from the following courses: Span. 505, 515 or 622, 552, 557, 626, 627, 635, 640, and 650.

Teaching. The major with teaching emphasis in Spanish in either Fairmount College of Liberal Arts and Sciences or the College of Education consists of at least 30 hours beyond Span. 112 or its equivalent. These hours must include the basic hours listed above plus a minimum of 12 upper-division hours, six of these chosen from the language major and six from the literature major.

In addition to the major, it is recommended that future teachers take courses beyond the general education requirements in other foreign languages, history, art history, English, or philosophy.

Students who wish to enter the student teaching program must have a 3.00 grade point average in Spanish and departmental approval based on demonstrated proficiency in the use of both oral and written Spanish in order to be admitted to the professional semester. It is strongly recommended that teaching majors take Span. 505 and/or 623. Spanish majors seeking teacher certification must also complete the basic courses required by the Teacher Education Program (see College of Education).

Majors interested in teaching Spanish at the elementary school level should consult the department's professor in charge of teacher education.

Minor. A minor in Spanish consists of a minimum of 11 hours beyond the Span. 111-112 level and must include Span. 220, 223, 225, and three hours at the 500-level or above.

**Related Fields.** Courses in Spanish or Latin American history, political science, economics, or art are strongly recommended for all majors. With departmental approval, courses in related fields taken in the Wichita State University Summer Program in Mexico may count toward the Spanish major.

**Native Speakers.** Native speakers are those who have completed a substantial amount of their education in a Spanish-speaking country. Native speakers of Spanish are normally not admitted to 100- and 200-level courses. To complete a major, Span. 300 plus 12 hours of upper-division work are required.

High School Spanish. Students who have completed more than two units of high school Spanish should consult with an advisor in the Spanish department before enrolling in Spanish courses.

**Lower-Division Courses**

111-112. Elementary Spanish. (5). Emphasizes the four fundamental skills in language
learning; understanding, speaking, reading and writing.

150. Workshop in Spanish. (2-4). Repeatable for credit.

>210Q. Intermediate Spanish. (3). General education introductory course. Continues the four fundamental skills in language learning: understanding, speaking, reading and writing. Emphasizes conversation and cultural readings. Prerequisite: Span. 112, two units of high school Spanish or departmental consent.

215. Intermediate Spanish II. (5). Intensive review of Spanish; special emphasis on conversation. Course offered only in Puebla, Mexico. Prerequisite: Span. 112, two units of high school Spanish or departmental consent.

220. Intermediate Spanish Grammar and Composition. (3). Prerequisite: Span. 210Q or three units of high school Spanish or departmental consent.

>223. Selected Spanish Readings. (3). General education further studies course. Intensive reading of Latin-American and Spanish literature works. Also includes outside readings and reports. Course may be used to meet the LAS literature requirement. Prerequisite: Span. 210Q or three units of high school Spanish or departmental consent.

225. Spanish Conversation I. (2). Prerequisite: Span. 210Q or three units of high school Spanish or departmental consent. Should be taken with Span. 220.

281. Cooperative Education. (1-4). Provides the 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 and approved by appropriate faculty sponsors. May be repeated. Prerequisite: Span. 223. Offered Cr/NCr only.

Upper-Division Courses

>300. Intermediate Spanish Readings. (3). General education further studies course. Intensive reading and analysis of Spanish literary works of all periods. Course may be used to meet the LAS literature requirement. Prerequisite: Span. 223 or departmental consent.

325. Spanish Conversation II. (2). Continuation of Span. 225 with continued emphasis on fluency in Spanish and on vocabulary building. Prerequisite: Span. 225 or departmental consent.


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.

505. Spanish Phonetics. (2). Cross-listed as Ling. 505. Prerequisite: any 200-level course or departmental consent.

515. Major Topics. (1-4). Special studies in (a) language, (b) literary reports, (c) commercial Spanish, (d) the language laboratory, (e) music, (f) composition, (i) problems in teaching Spanish, (j) advanced conversation. Repeatable for credit. Prerequisite: departmental consent.

525. Spanish Conversation III. (2). Offered fall semester only. Prerequisite: Span. 325 or departmental consent.

526. Advanced Grammar and Composition. (3). Offered spring semester only. Prerequisite: Span. 220 or departmental consent.

531. Survey of Spanish Literature. (3). Main currents of Spanish literature from 1700 to the present. Prerequisite: Span. 300 or departmental consent.

532. Survey of Spanish Literature. (3). Spanish literature from the beginning to 1700. Prerequisite: Span. 300 or departmental consent.

534. Contemporary Spanish Theater. (3). Prerequisite: Span. 300 or departmental consent.

536. Contemporary Spanish Novel. (3). Prerequisite: Span. 300 or departmental consent.

540Q. Contemporary Spanish Literature in English Translation. (3). Content may vary from semester to semester, including Spanish and/or Latin-American literature. 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.

552. Business Spanish. (3). Provides the opportunity to learn and practice commercial correspondence, business vocabulary, translation and interpretation of business texts. Prerequisite: Span. 526.

557. Literary and Technical Translating. (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.

620. Survey of Latin-American Literature. (3). Main currents of Latin-American literature from 1500 to 1800. Prerequisite: Span. 300 or departmental consent.

621. Survey of Latin-American Literature. (3). Main currents of Latin American literature from 1800 to present. Prerequisite: Span. 300 or departmental consent.

622. Special Studies. (1-4). Topic for study chosen with aid of instructor. Repeatable for credit. Prerequisite: instructor's consent.

623. Seminar in Spanish. (1-5). Special studies in (a) language, (b) Spanish and Latin-American literature, (c) Spanish and Latin-American culture and civilization and (d) methods of teaching Spanish in the elementary and secondary schools. Repeatable for credit. Prerequisite: departmental consent.

625. Contemporary Latin-American Novel. (3). Prerequisite: Span. 300 or departmental consent.

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.

627. Latin-American Civilization. (3). Intensive study of Latin-American culture, including the historical and geographical factors in its development and its contributions to world civilization. Prerequisite or corequisite: Span. 300 or departmental consent.

628. Contemporary Latin-American Theater. (3). A study of contemporary theater from 1900 to present. Prerequisite: Span. 300 or departmental consent.

631. Latin-American Short Story. (3). Study of the main writers in contemporary Latin-American literature. Prerequisite: Span. 300 or departmental consent.

635. Introduction to Romance Linguistics. (3). Cross-listed as Fren. 635 and Ling. 635. An introduction primarily to the historical phonology and morphology of the romance languages emphasizing French and Spanish. Prerequisite: departmental consent.

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.

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.

750. Workshop in Spanish. (2-4). Repeatable for credit.

Courses for Graduate Students Only


826. Grammar and Stylistics. (3). Intensive study of advanced grammar and stylistic usage.

827. Latin American Civilization and Culture. (3). Introduction to historical and cultural development in Latin America, exploring the legacy of the Spanish encounter/conquest. Emphasis is on Spanish colonization. Prerequisite: graduate standing.

831. Seminar in Spanish Literature. (3). (a) Middle Ages, (b) Renaissance, (c) Golden Age theater, (d) Cervantes, (e) modern novel, (f) Generation of '98, (i) romanticism, (j) 20th century poetry, (k) criticism, (l) literature, (m) 20th century theatre, and (n) contemporary Spanish novel.
Philosophy

The study of philosophy is relevant to all aspects of life and can be pursued fruitfully at many levels. Philosophical thought may direct itself to such diverse topics as the nature of reality, the conditions of knowledge, the justifications for political authority, the reality of subatomic particles, the existence of God, the criteria of aesthetic evaluation, the structure of logical reasoning, and the foundations (if any) of morality. Because of the breadth of the philosophical enterprise, the study of philosophy can be approached from many directions and need not involve a hierarchy of prerequisites. Philosophy majors pursue many careers—teaching, law, medicine, city management, and sales. The philosophy department reflects the breadth and diversity of the philosophical enterprise and offers a wide variety of courses.

Major. A major requires a minimum of 27 hours of philosophy courses, at least 15 of which must be in courses numbered 300 or above. Each philosophy major must meet with a departmental advisor at least once a semester to plan or review a program of study. These programs are designed in terms of the individual student's interests and future plans. Up to 12 hours of philosophy courses taken before the decision to major in philosophy may count toward a major. Additional hours may be counted with the advisor's consent.

Minor. A minor consists of 15 hours of philosophy courses, selected in consultation with a departmental advisor, that orient students to the philosophic aspects of their major fields.

Lower-Division Courses

100G. The Meaning of Philosophy. (3). General education introductory course. An exploration of the meaning of philosophic activity. Through an examination of several basic interpretations of the distinguishing intentions, characteristic procedures and essential functions of the philosophic endeavor, course introduces some of the fundamental problems and possible values of philosophy. Develops a broad understanding of the meaning of philosophy as a diverse and self-critical historical enterprise.

125Q. Introductory Logic. (3). General education introductory course. Deals with the uses of logical concepts and techniques to evaluate and criticize reasoning. Studies some elementary systems of formal logic. Arguments evaluated are drawn from such diverse fields as law, science, politics, religion, and advertising.

129. University Experience. (3). An examination of the structure and process of university education in the contemporary setting. Attends especially to the personal, moral and spiritual problems and opportunities presented by the modern university experience. Provides clarification and guidance in understanding the university and in choosing one's own future.

144Q. Moral Issues. (3). General education introductory course. An introduction to philosophical thought about ethics. Discusses a number of contemporary moral issues and considers various philosophical approaches to their solutions.

150. Workshop in Philosophy (1-2). Short-term courses with special philosophical emphases.

Upper-Division Courses

>300G. Science and the Modern World. (3). General education issues and perspectives course. Develops an understanding of the methods and accomplishments of science and how these have affected the way people understand themselves, society and the universe. The approach is both historical, with respect to the re-creation of the prescientific world view and the developments of science, and analytic with respect to understanding the goals, methods and limits of contemporary science. No prerequisite but prior completion of general education requirements in science is desirable.

>301. Language and Philosophy. (3). General education further studies course. Cross-listed as Ling. 301. Examines the relationships between philosophy and language. Focuses on questions such as: What is the relation between language and thought? Language and the world? What can the study of language contribute to the resolution of philosophical problems?

>302. Values and the Modern World. (3). General education issues and perspectives course. An examination of the philosophical pressures on values wrought by rapid modern cultural and technological change. Explores the relations between social values and social institutions, provides a framework for critically and objectively thinking about moral values, and considers various standards proposed for resolving moral dilemmas.

>303Q. Nineteenth Century Philosophy. (3). General education further studies course. A study of selected 19th century philosophers or systems of thought such as Fichte, Schelling, Hegel, Schopenhauer, Marx, Mill, Bradley, Kierkegaard, Peirce, Nietzsche, Comte, Dibuthe, Schleiermacher, idealism materialism, positivism, empiricism and pragmatism.

>308. Philosophy of Economics. (3). General education further studies course. Investigates various philosophical issues inherent in economic theory and decision making. Philosophical problems discussed include concepts of rationality, decision theory economic freedom, economic justice, morality and markets and the methodology and presuppositions of economic inquiry.

>311Q. Philosophy of Law. (3). General education further studies course. An introduction to philosophical problems arising in the theory and practice of law. Includes the objective basis of legal systems, the relationship between morality and legality, the justification of civil disobedience, the limits of legal constraints on the individual and the nature and justification of punishment. Attention to classical and contemporary readings.

>313Q. Political Philosophy. (3). General education further studies course. An examination of various philosophical issues concerning political systems. Discusses issues such as the nature of political authority, the rights of individuals, constitutionalism and civil disobedience.

>315. Late Modern Philosophy. (3). General education further studies course. A study of philosophical thought in the 19th century with selections from philosophers such as Berkeley, Hume, Reid, Adam Smith, Butler, Hutcheson, Wolff and Kant, and movements such as empiricism, rationalism, the Scottish common sense school and idealism.

>320. Philosophy of Science. (3). General education further studies course. A study of the methods, goals and world views of the sciences with attention to such topics as the structure and evaluation of scientific theories, the nature of explanation, the dynamics of scientific revolutions and the impact of science on human society and values.

>322Q. Early Modern Philosophy. (3). General education further studies course. A study of philosophical thought in the period from the Renaissance through the 17th century with selections from philosophers such as Pico, Vico, Galileo, Cusanus, Telesio, Erasmus, More, Hobbes, Bacon, Machiavelli, Descartes, Spinoza, Leibniz, Malebranche and Locke.

325. Formal Logic. (3). Cross-listed as Ling. 325. A study of systems of formal logic including sentential and predicate logic. Emphasizes the uses of these systems in the analysis of arguments.

>327. Philosophy of Health Care. (3). General education further studies course. An examination of the philosophical and ethical issues generated by the development and expansion of the health care professions. Examines topics such as the concept of health, rights of patients, the medical team, professional rights and responsibilities, behavior control, euthanasia and institutional care. For the layperson as well as the medical professional.

>331Q. Ancient Greek Philosophy. (3). General education further studies course. An examination of the development of Greek philosophy in its major phases, including an exploration of the Milesian and Eleatic traditions, Pythagoras, the Atomists, the Pluralists, the Sophists, Socrates, Plato and Aristotle.

>338. Philosophy of Feminism. (3). General education further studies course. Cross-listed
as Wom. S. 338. An exploration of philosophical issues raised by the feminist movement emphasizing conceptual and ethical questions.

>346Q. Philosophy of Religion. (3). General education further studies course. Cross-listed as Rel. 346. An examination of some basic religious problems such as the nature and grounds of religious belief, religious language, the existence and nature of God, human immortality and the problem of evil.


>354. Ethics and Computers. (3). General education further studies course. Ethics with application to the ethical issues which may arise from the use of computers. Attention to such topics as the moral responsibilities of computer professionals for the effect their work has on persons and society; the moral obligations of a computer professional to clients, employer and society; the conceptual and ethical issues surrounding the control and ownership of software; and the justification of regulation of the design, use and marketing of computer technology. Prerequisite: junior standing or departmental consent.

>356. Ethical Theory. (3). General education further studies course. A study of selected topics in ethics. Investigates issues such as the meaning and justification of moral judgments, the nature of morality, the relations between normative categories and the concept of justice and the problem of revolution in moral schemes. Prerequisite: one course in philosophy.

>357. Philosophy of the Arts. (3). General education further studies course. An intensive examination of one or more fundamental problems or themes in the philosophy of art or in the special aesthetics of painting, music, sculpture, literature, drama, movies etc. Includes the problem of tragedy, the character of the aesthetic attitude, the function of the arts, the legitimacy of general art theory, the presuppositions of specialized art theory the creative act, art and truth, art and life and the nature and function of art criticism.

>400. Honors Seminar. (3). General education further studies course. Cross-listed as Hrns. 400. An honors course on a special topic, to be announced. Repeatable for credit up to six hours. Prerequisite: honors student or departmental consent.

Courses for Graduate/Undergraduate Credit

518. Recent British-American Philosophy. (3). Examination of philosophical ideas and movements in recent British and American philosophy. Discusses movements such as logical positivism, pragmatism, ordinary language philosophy and analytic philosophy. Readings are selected from figures such as Russell, Wittgenstein, Pierce, Deveay and Quine.

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.

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.

546. Rationalism. 3. A study of the philosophical views that emphasize reasoning rather than sensory experience as the source of knowledge with particular attention paid to the philosophies of Descartes, Spinoza, and Leibniz.

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 of the 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.

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.

555. Philosophy of the Social Sciences. (3). Studies such topics as the relations of social science with natural science and philosophy, methodological problems of social science, the nature of sound explanation concepts and constructs and the roles of mathematics and formal theories in social science.

557. Contemporary European Philosophy. (3). An exploration of a theme, issue, philosopher or movement in contemporary European philosophy. Includes such philosophers as Husserl, Heidegger, Jaspers, Gadamer, Habermas, Marcuse, Adorno, Bergson, Sartre, Merleau-Ponty, Bachelard, Lakan, Derrida, Foucault and Ricoeur. Examines philosophical movements such as phenomenology, idealism, existentialism, structuralism, process philosophy, hermeneutics and Marxism.

558. Studies in a Major Philosopher. (3). A concentrated study of the thought of one major philosopher announced by the instructor when the course is scheduled. Repeatable for credit. Prerequisite: instructor's consent.

559. Special Studies. (3). Topic for study announced by instructor. Repeatable for credit. Prerequisite: instructor's consent.

674. Artificial Intelligence and Philosophy. (3). Cross-listed as CS 674. Transfer of ideas between artificial intelligence and philosophy: concept and techniques of artificial intelligence and their application in philosophy (search, heuristic, problem solving, knowledge representation, learning, discovering); sources of insight for artificial intelligence in different branches of philosophy. The analogy between minds and computers "cognition is a computation and the mind is a computer," is contrasted with "there are mental features not accessible to computation." Discusses the relevance of Godel's theorem and of other results in the domain of computability in this context. Prerequisites: at least one 300-level course in computer science or philosophy, Math. 243 and five hours toward the major in any one of the physical or biological sciences with grades of C or better or departmental consent.

699. Directed Reading. (2-3). For the student interested in doing independent study and research in a special area of interest. Repeatable for credit. Prerequisite: departmental consent.

Courses for Graduate Students Only

805. Business and Morality. (3). Critically examines moral issues particularly germane to business. Includes theories of distributive justice, theories of property rights, the role of business as a social institution, employment and obligations, environmental issues and theories of socially responsible investment practices. Readings from classical and contemporary authors.

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.

Physics

The Department of Physics offers a flexible and challenging undergraduate program of study leading to the Bachelor of Arts (BA) degree or the Bachelor of Science (BS) degree and a graduate program leading to the Master of Science (MS) degree.

The curriculum of the department includes the traditional core physics courses and also provides the opportunity for the student to explore areas of individual interest through special projects.

Major: The following courses are required for a physics major: Phys. 213Q-214Q or 313Q-314Q, 315Q-316Q, 551, 611, 612, and 631-632; Math. 550 or 555 and 545, 547, or 757; and five hours of chemistry.

For the Bachelor of Arts (BA) degree, two additional hours of Phys. 516, 517, or 616 plus six additional hours of upper-division physics electives are required.

For the Bachelor of Science (BS) degree, Phys. 616, three semesters chosen from Phys. 516 and 517, six additional upper-division hours in physics, and five additional hours of chemistry are required. Ten hours of a foreign language also are required for the BS.

Chemical Physics Option. A student majoring in physics may select a chemical
physics option. This option consists of the BS or BA requirements in physics, with Phys. 642 chosen as an elective, plus six hours of chemistry beyond the 111-112 sequence, to be chosen from Chem. 545, 546, 641, or 741.

Other Options. Other programs are available which provide the student an opportunity to combine the study of physics with an interest in another area. On an individual basis, students have included interests in astronomy, engineering, geology, computer science, biological sciences, and education.

Minor. A minor in physics consists of Phys. 213Q-214Q or 315Q-314Q-315Q-316Q and at least six additional hours of physics courses numbered above 500.

Lower-Division Courses

111Q. Introductory Physics. (4). 3R; 3L. General education introductory course. A general physics course for liberal arts students and those who have not had physics in high school. Includes mechanics, heat, electricity and magnetism, wave phenomena and modern physics. Not open to students who can meet prerequisites for Phys. 312Q. Prerequisite: two years of high school algebra or one each of algebra and geometry or equivalent.

131. Physics for the Health Sciences. (3). Special courses in mechanics, heat, electricity and magnetism, wave phenomena and modern physics. Open to students who have not had high school physics. Includes special topics in physics as related to the health sciences. Prerequisite: two years of high school algebra or one each of algebra and geometry or equivalent.

151. Preparatory Physics. (2). A general physics course for those who have not had adequate preparation for Phys. 313Q. Emphasizes problem solving using selected areas of physics, including vectors, one-dimensional motion, rotational motion, equilibrium, electrolytic conductors, statics, potential, motion, and mirrors. Prerequisite: Math. 112.

196. Laboratory in Modern Astronomy. (1). 3L. The application of the techniques and analysis of the data of modern astronomy. When 196 is completed, 195G and 196 count as a laboratory science. Requires field trips. Prerequisites: two semesters of high school algebra or the equivalent, or instructor's consent, and Phys. 195G, which may be taken concurrently.

198. Discovery in Astronomy. (3). Discusses a selected topic in astronomy to develop an understanding of the discoveries and problems of modern astronomy. Primarily for general students with little or no background in science or math. See course schedule for topic each semester.

213Q. General College Physics I. (5). 4R; 3L. General education introductory course. Mechanics, heat and wave motion. For students with a working knowledge of algebra and trigonometry but who have had no calculus. Prerequisite: high school trigonometry or Math. 112.

214Q. General College Physics II. (5). 4R; 3L. General education further studies course. A continuation of Phys. 213Q. Electricity, light and modern physics. Prerequisite: Phys. 213Q or 312Q.

223. The Mechanical Universe. (4). A study of the development of mechanics with calculus. The mechanics is applied to planetary motion, harmonic motion and waves as embodied in the newly developed TV course "The Mechanical Universe." Not a lab course but lab credit can be obtained by departmental arrangement. Prerequisite: high school trigonometry or Math. 112.

Upper-Division Courses

313Q. University Physics I. (4). General education introductory course. The first semester of a calculus-based physics sequence. Studies mechanics, heat, and wave motion. High school physics or Phys. 151 is assumed as preparation for this course. Natural science majors are required to take the lab Phys. 315Q that accompanies this course. Credit is not given for both Phys. 213Q and 313Q. Corequisite: Math. 243.

314Q. University Physics II. (4). General education further studies course. The second semester of a calculus-based physics sequence. Studies electricity, magnetism and light. Natural science majors are required to take the lab Phys. 316Q that accompanies this course. Credit is not given for both Phys. 214Q and 314Q. Prerequisites: Math. 243 with a grade of C or better and Phys. 213Q with a grade of B or better or Phys. 313Q.


320. Scientific Thinking. (3). How science, particularly physics, is done. How do we know what we know? What do we mean when we say, as scientists, that we understand a phenomenon? How do we approach a problem? Emphasizes the nature of science rather than particular theories. Gives an appreciation of science as a human intellectual activity and of the picture that modern physics gives us of the universe.

395Q. Solar System Astronomy. (3). General education further studies course. Studies the sun, major planets and minor bodies of the solar system, particularly their nature and origin. Emphasizes classical ground-based observations and the results of satellite investigations. Primarily for students with little prior contact with science.

481. Cooperative Education in Physics. (1-4). Co-op (1-4). Supervised field training experiences designed to provide high school students an opportunity to apply one-credit experiences associated with physics courses. No more than four hours of credit may be applied toward satisfying the requirements for a major in physics. Offered CR/NC only. Prerequisite: departmental consent.

Courses for Graduate/Undergraduate Credit

501. Special Studies in Physics for Educators. (1-3). 3L. A series of courses covering basic physical concepts which provide university-level background for teachers. Repeatable for a maximum of 5 hours. Prerequisite: in-service or pre-service teacher.

516. Advanced Physics Laboratory. (2). 4L. Explores some of the applications of electronics in scientific research. The experiments are open ended and project oriented. Repeatable up to a maximum of eight credit hours. Corequisite: Phys. 551.

517. Electronics Laboratory. (2). 1R; 3L. 3L. An introduction to modern physics emphasizing the features of atomic nuclear and solid state physics that require modifications of classical physics for their explanation. Prerequisite: Phys. 214Q or 314Q or departmental consent. Corequisite: Math. 344.

555. Modern Optics. (3). Geometrical and physical optics, coherence theory, and Fourier optics. Optional topics may include radiation, scattering, optical properties of solids, and optical data processing. Prerequisites: Phys. 214Q or 314Q and Math. 344.

600. Individual Readings in Physics. (1-3). Repeatable but total credit may not exceed six hours for physics majors. Prerequisite: departmental consent.

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 six hours. Prerequisite: instructor's consent.

616. Computational Physics Laboratory. (3). 2R; 2L. 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.
621. Elementary Mechanics. (3) Motion of a particle in one and several dimensions, central forces, the harmonic oscillator and the Lagrangian formulation of mechanics. Prerequisites: Phys. 214Q or 314Q and Math. 344 with grades of C or better.

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. 214Q or 314Q and Math. 344 with grades of C or better.


651. Quantum Mechanics. (3) Introduction to quantum mechanics, the Schrödinger equation, elementary perturbation theory, and the hydrogen atom. Prerequisite: Phys. 551.

681. Solid State Physics. (3) A one-semester introduction to solid state physics, which explores the relations 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.

714. Theoretical Physics. (3) Cross-listed as Math. 714. 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. Prerequisites: Math. 555 or instructor's consent.

Political Science

Politics—a means of managing conflict and distributing the materials of society to its members—affects everyone because everyone lives in society and conflict exists in every society. This fact led the Greek philosopher Aristotle to observe centuries ago that “man by nature is a political animal.” While contemporary political scientists approach the study of politics in a variety of ways, all agree that politics is a central characteristic of human activity.

Political science students at Wichita State University take courses in at least four of five subject areas: (1) American politics and institutions, (2) comparative politics, (3) international politics, (4) political theory and philosophy, and (5) public administration. Most political science majors supplement their curriculum by taking elective hours in the humanities—history, philosophy, and literature, for example—and in other social sciences, such as economics, anthropology, sociology, and psychology. The department also recommends that students take courses in statistics and computer applications.

Students with political science degrees may become practicing politicians or they may pursue careers in public administration, government service, law, journalism, business, or teaching at the secondary or college level.

The political science degree program at Wichita State is designed to accommodate these career interests as well as others. The requirements for the major are flexible enough to permit students to concentrate in one or two areas.

Major. A major consists of Pol. S. 121Q and 30 additional hours, including at least one course in four of the five groups below.

Minor. A minor consists of Pol. S. 121Q and 12 additional hours, at least six of which must be in upper-division courses.

Group 1, Political Theory and Philosophy—Pol. S. 232Q, 345, 444, or 536

Group 2, American Politics—Pol. S. 315, 316Q, 317, 318, 319, 358Q, 551, or 552Q

Group 3, Comparative Politics—Pol. S. 226Q, 320, 330, 523Q, 524, or 525

Group 4, International Politics—Pol. S. 335Q, 336, 338, or 534

Group 5, Public Policy and Administration—Pol. S. 321, 505, 506, 533, 564, 580, or 587

Related Fields. Because of the changing nature of the social sciences and because of their increasing applicability in both the public and private sectors, political science majors should take appropriate courses in other social sciences, particularly Econ. 201Q-202Q, statistics, and computer science.

Public Administration Option in Political Science. The goal of the public administration option is to prepare students for future entrance into public service. The option meets several needs. Many students in the social sciences plan for careers in the public sector, and there is evidence that public agency heads are demanding more and better qualified students with undergraduate degrees to face the challenges of the future in public service. Although the option emphasizes the preparation of undergraduates for public service, those who plan to enter graduate school in the fields of administration and public policy also will be prepared to undertake a more professional course of study.

A major with a public administration option consists of 36 hours, including Pol. S. 121Q; 345, 444, or 536; one course from Group 3 (Comparative Politics) or Group 4 (International Politics); and the required hours from each area below.


Area B (nine hours)—Pol. S. 321, Introduction to Public Administration, and Two of the following: Pol. S. 564, Comparative Public Administration; Pol. S. 580, Administration and the Policy-Making Process; or Pol. S. 587, Theory of Administration
Lower-Division Courses

>101G. Politics: Who Gets What. (3). General education introductory course. Focuses on some of the great political ideas and applies them to modern issues. Even if there are no eternal truths, there are eternal problems. Major ideas include: the rulers and the ruled, liberty versus order, the right of dissent, political obligation and issues of conscience. Also, current policies developed cover sex in politics, First Amendment freedoms, ethnic politics and the politics of oil.

103G. Games Nations Play: Problems in International Relations. (3). Course's immediate and most apparent aim is to familiarize students with a number of international problems. The intention, however, is to achieve more general and long-lasting aims rather than to transmit facts. The dual aims thus become the development of a sensitivity on the part of students to international problems that will be a part of their lives and to create a framework in which the students can analyze the international problems they encounter in the future.

110. Russian Studies. (3). Cross-listed as Russ 110 and Hist. 110. Team-taught by faculty from history, political science, and modern and classical languages and literatures. Prepares students wishing to pursue additional courses and/or programs in Russian history, Russian language and literature, Russian government and politics, and/or international relations, including business. Covers medieval, czarist, Soviet, and present day (post-Soviet) Russia.

>121Q. American Politics. (3). General education introductory course. An analysis of the basic patterns and structure of the American political system emphasizing policies and problems of American politics.

150. Political Science Workshop. (1-3). Prerequisite: instructor's consent.


222. East Asia. (3). Cross-listed as Hist. 222, Rel. 222Q and LAS-I 222Q. A survey of basic topics on China, Korea and Japan, including history, philosophy, religion, politics and economics. Taught by a team of instructors from several departments.

>226Q. Comparative Politics. (3). General education introductory course. An analysis of the basic patterns and structure of Western democratic and political systems, transitional systems and dictatorial or totalitarian systems.

>232Q. Basic Ideas in Political Theory. (3). General education issues and perspectives course. Shows the direct relationship between political philosophy and practical political structures and policies. Examines the political philosophies of six important Western philosophers at an introductory level. Studies different models of democracy in order to demonstrate the relationship between a set of basic philosophical assumptions and the political society that seems appropriate to that set of assumptions. Examines one or two major political issues to illustrate the various kinds of solutions that may be suggested by different political philosophies.

Upper-Division Courses

>315. The Presidency. (3). General education further studies course. Focuses upon the evolution of the presidential office, the recruitment of presidents and the nature of presidential power.

>316Q. The Congress. (3). General education further studies course. Focuses on the Congress with particular attention to interest articulation at both state and national levels.

>317. Urban Politics. (3). General education further studies course. An analysis of politics in urban areas, including the nature and distribution of community power, influence and leadership, the nature of community conflict, the formation of policy, urban problems and political solutions and trends in urban politics.

>318. Political Parties. (3). General education further studies course. The role of political parties in the American political decision-making process at the national, state and local levels.

>319. State Government. (3). General education further studies course. Examines the role of the states in the federal system and compares state politics and their political institutions.

>320. Politics of Developing Areas. (3). General education further studies course. A survey of the political systems in Latin America, Africa, the Middle East and south and southeastern Asia. Special attention to colonialism as a system, the effects of colonialism and patterns of emerging nations.

321. Introduction to Public Administration (3). A general survey of the scope and nature of public administration; policy and administration; administrative regulations and adjudication; organization and management; budgeting and fiscal management; public personnel administration; political, judicial and other controls over the administration.

325. Women in the Political System. (3). Cross-listed as Womm. S. 325. Examines the political process of policy making using policies of current interest concerning women. Explores the association of societal gender role expectations with existing and proposed public policies that pertain to women's lives. Prerequisite: 6 hours of social science or instructor's consent.

326. Post-Communist Europe. (3). A systematic study of contemporary political developments in the former Soviet Union and East Europe. Examines major policy-making institutions and processes and considers the fundamental principles on which the political system is based. Includes selection of leaders and their roles in policy-making; legislative bodies; organization and representation of interest groups; political parties and elections; political aspects of the educational system, the media, religious institutions, and ethnicity.

>335Q & >336. International Politics and Institutions. (3 & 3). General education further studies courses. 335Q: Focuses on interaction between actors in the international system. Covers nature of conflict and conflict resolution. Either 335Q or 336, but not both, may be accepted toward a major in history. 336: Focuses on the role of international organizations in the international system. Emphasizes the United Nations. Also covers some regional organizations.

>337. International Force and Intervention. (3). General education further studies course. Examines the use of force and intervention in the international system. Covers the use of diplomatic and military surprise and crisis and the nature of war. Also discusses problems involved in comparing arms levels between Soviet and Western coalitions in and transferring arms to third World countries.

338. Soviet Foreign Policy. (3). The concept, content and control of Soviet foreign relations; instruments and tools of Soviet diplomacy; strategy and tactics; change and continuity from Russia to Soviet foreign relations and policy aims; and execution of foreign policy in selected areas.

>345. Classical Medieval Political Theory. (3). General education further studies course. Examines the beginnings of Western political philosophy through works of Plato and Aristotle. This original body of political ideas dominated the Western world for more than 2,000 years. Traces the changes in emphasis that occurred in this tradition through the Roman Stoics and the religious philosophers of the Middle Ages. Familiarity with these early political ideas is a major contribution to understanding subsequent Western political philosophies.


>358Q. American Political Thought. (3). General education further studies course. Examines the use of force and intervention in the international system. Covers nature of conflict and conflict resolution. Either 335Q or 336, but not both, may be accepted toward a major in history. 336: Focuses on the role of international organizations in the international system. Emphasizes the United Nations. Also covers some regional organizations.

>359. Special Topics in Political Science. (1-3). General education further studies course. An analysis of selected titles in political science in a seminar setting. Content varies depending upon the instructor. Repeatable for credit.

398. Directed Readings. (1-3). For exceptional students to meet their needs and deficiencies. Repeatable for credit. Prerequisites: senior standing and departmental consent.

>444. Modern Political Theory. (3). General education further studies course. Continues the study of Western political philosophy beginning with the decisive break with the classical tradition made by Machiavelli early in the 16th century. Studies major philosophers
Hobbes, Locke and Rousseau, known as philosophers of the social contract who exercised a great influence on the creation of the American political system. Also studies Marx, a political thinker who moves strongly in the direction of 20th century political philosophy. Philosophers of this period have collectively had a profound impact on political life in this century.

481. Cooperative Education in Political Science. (1-3). Provides practical experience to complement the student's more formal political science curriculum. Student programs must be approved by the department. Offered Cr/NoCr only.

490. Internship in Government/Politics. (3-6). (Washington, 6; Topeka, 3). Credit for an approved work experience in a public, quasi-public or governmental agency, including an academic component. Interns participate in the program co-sponsored with the University of Kansas for which an on-site coordinator is provided. Kansas legislative interns spend two days per week in Topeka while the legislature is in session. Both internships offered each spring semester. Prerequisites: sophomore or upper-class standing; Pol S 121Q or equivalent and instructor's consent.

Courses for Graduate/Undergraduate Credit

505. The Politics of Health. (3). Shows how governments in the United States make decisions in the health field, describes the political forces shaping governmental policy in health and analyzes the arguments for and against an increased governmental role in health.

523Q. Government and Politics of Latin America. (3). General education further studies 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.

524. Politics of Modern China. (3). General education further studies course. Emphasizes the study of the 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 question about the future development of 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.


534. Problems in Foreign Policy. (3). General education further studies course. Examines domestic and international problems associated with U.S. foreign policy.

537. Contemporary Political Theory. (3). General education further studies course. 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. Gives attention to the importance of these new philosophies upon political structures and issues.

551. Public Law. (3). General education further studies course. An analysis of the role of the judiciary in the American political system. Emphasizes the judicial review of state and federal legislation, the separation of powers, federalism, the tax power and the commerce clause.

552Q. Civil Liberties. (3). General education further studies 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.

560. The Planning Process. (3). Cross-listed as Pol. Adm. 560. 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 elected officials as participants in the planning process.

564. Comparative Public Administration. (3). Cross-listed as Pol. Adm. 564. Studies the administrative system of selected developed and developing countries emphasizing the various methods and approaches of comparative analysis and the relationships between administrative institutions and their environmental settings.


700. Advanced Directed Readings. (3). Repeatable for credit. Prerequisite: departmental consent.

701. Method and Scope of Political Science. (3). Emphasizes the methods of science and methodology (as distinguished from method and technique) and exposes students to recent works of methodological import in the various subfields within the discipline. Prerequisite: departmental consent.

703. Professional Seminar in Political Science. (3). Introduces entering graduate students to the various subfields of the discipline. Should be taken the first or second semester of graduate study.

710. Public Sector Organizational Theory and Behavior. (3). Cross-listed as Pol. Adm. 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.

725. Public Management of Human Resources. (3). Cross-listed as Pol. Adm. 725. Surveys the major areas of management of human resources in the public sector. Includes hiring, training, evaluation and pay promotion policies. Special emphasis on 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.

730. Workshop. (2-4). Prerequisite: instructor's consent.

Courses for Graduate Students Only

810. Seminar in Comparative Government. (3). The comparative study of selected aspects of the politics and institutions of foreign governments. Prerequisite: departmental consent.

835. Seminar in International Relations. (3). Analysis of special problems in and approaches to the study of international relations. Prerequisite: departmental consent.

841. Seminar in Urban Politics. (3). An intensive analysis of urban politics emphasizing individual research projects. Prerequisite: departmental consent.


845. Seminar in Political Theory. (3). Detailed study of the relevant works of a major political philosopher and his/her contribution to contemporary thought. Prerequisite: departmental consent.

851. Seminar in Public Law and Judicial Behavior. (3). Analysis of special problems in and approaches to the study of legal systems. Emphasizes developing awareness of research in the field. Prerequisite: departmental consent.

856. Seminar in American Politics and Institutions. (3). Analytical study of selected topics in American politics emphasizing individual research. Repeatable for credit when content differs substantially. Prerequisite: departmental consent.
873. Seminar in Research Design. (3). Requires 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: P. Adm. 865 or instructor's consent.

874. Seminars in Finance System. (3). Cross-listed as P. Adm. 868. An analytical study of selected topics in the politics and administration of revenue, expenditure and borrowing policies of governmental organizations. Prerequisite: departmental consent.

875. Seminar Paper Option. (3). Requires students to extensively revise a seminar paper they wrote within their area of emphasis. Paper is written under the direction of a faculty member and orally defended before a committee of three or more faculty, including a chairperson. Prerequisite: departmental approval.

876. 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.

877. 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.

878. Thesis. (1-3).

### Psychology

The course of study is designed to provide a breadth of knowledge in the field of psychology. Accordingly, the major requires students to choose courses from foundation areas (Group 1); traditional human oriented areas (Group 2); and applied areas (Group 3).

The program is designed to prepare students for postgraduate work in psychology but is flexible enough to accommodate the interests of students who do not intend to pursue graduate study in psychology. Such students may be career oriented (e.g., social work, management training, etc.) or simply have an interest in learning more about why we behave as we do.

Major. The major for the Bachelor of Arts (BA) degree consists of a minimum of 30 hours in psychology, at least nine of which are earned at Wichita State. Psy. 111Q is prerequisite for all higher number psychology courses. All BA majors are required to take Psy. 111Q, 401, 411, and 601. In addition, six hours must be taken from each of the groups listed below.

- **Group 1:** Psy. 302, 322, 332, 342Q, 402, 502Q, 512, 532, or 622
- **Group 2:** Psy. 304Q, 324Q, 334Q, 404, 414, 514, 524, 534, or 544
- **Group 3:** Psy. 316, 336, 386, 406, 416Q, 426, 516, 526, 536, 546, 556, or 720

Minor. The minor consists of a minimum of 15 hours selected in consultation with the student's major advisor.

**Kansas Alcoholism and Drug Addiction Counselors' Association (KADACA) certification.** KADACA certification requires Psy. 118, 128, 138, 158, 168, 306, 326, 356, and 148 (to be taken last). Psy. 111Q is a prerequisite to Psy. 306, 326, and 336. Psy. 148 should be taken after all other courses in the sequence have been completed. No special application to the Department of Psychology is required by WSU students to enroll in these courses. The certifying agency is KADACA, not WSU.

### Lower-Division Courses

108. Stress and Stress Management. (3). An introduction to stress and stress management techniques. Class discussion emphasizes the conceptualization of stress and its social impact; complemented by stress reduction techniques. Course does not satisfy the University's social science requirement nor does it count for a psychology major.

111Q. General Psychology. (3). General education introductory course. An introduction to the general principles and areas of psychology. Includes learning, perception, thinking, behavioral development, intelligence, personality, and abnormality of behavior. Course is a prerequisite for advanced and specialized courses in psychology.

111Q. General Psychology. (3). General education introductory course. An introduction to the general principles and areas of psychology. Includes learning, perception, thinking, behavioral development, intelligence, personality, and abnormality of behavior. Course is a prerequisite for advanced and specialized courses in psychology.

118. Assessment Planning, Case and Records Management. (2). An introduction to differential criteria for evaluating alcohol and other types of substance abuse and dependence, in relation to other mental health issues. Includes types of documentation, record keeping, and case management required of substance abuse counselors. Does not satisfy WSU’s social science requirement nor does it count for a psychology major.

128. Pharmacology for Substance Abuse Counselors. (1). Covers states of intoxication, withdrawal, and side effects associated with alcohol and substance abuse. Includes cross addiction and adverse effects of combining psychoactive drugs with prescribed and over-the-counter medication. Does not satisfy WSU’s social science requirement nor does it count for a psychology major.

138. Ethics and Confidentiality in Substance Abuse Counseling. (1). Covers substance abuse client rights, state and federal regulations concerning client confidentiality, and professional code of ethics and credentialing requirements of substance abuse counselors. Does not satisfy WSU’s social science requirement nor does it count for a psychology major.

148. Field Experience in Substance Abuse Counseling. (2). Work experience in an agency that provides substance abuse counseling services. Students gain experience in assessment, case and record management, individual and group counseling, and other skills relevant to the work of a substance abuse counselor. Does not satisfy WSU’s social science requirement nor does it count for a psychology major. Offered Cr/No Cr only.

150. Workshop in Psychology. (1-4).

158. Medical High Risk Issues in Substance Abuse. (1). Covers sexually transmitted diseases, fetal alcohol syndrome, and other psychological and neurological consequences associated with alcohol and substance abuse. Does not satisfy WSU’s social science requirement nor does it count for a psychology major.

168. Multicultural Issues in Substance Abuse. (2). Covers cultural, ethnic, racial, and other special population differences affecting the use and abuse of addictive substances. Includes culturally developed techniques to make them more culturally sensitive. Does not satisfy WSU’s social science requirement nor does it count for a psychology major.

### Upper-Division Courses

102Q. Psychology of Learning. (3). General education further studies course. Explores basic principles of how organisms learn. Highlights key concepts such as reinforcement and punishment, generalization of behavior across settings and extinction of specific behaviors. Discusses important research, theoretical issues and current trends. Prerequisite: Psy. 111Q.

304Q. Social Psychology. (3). General education further studies course. A study of how social behavior is influenced by the behavior and characteristics of others. Includes attitude formation and change, attraction, interpersonal attraction, impressiveness and compliance, as well as the application of social psychological principles to an understanding of prosocial, aggressive and sexual behavior. Prerequisite: Psy. 111Q.

306. Introduction to Individual Counseling. (3). Surveys contemporary theories and techniques of individual counseling. Compares various theoretical approaches and includes practical applications of each theory studied. Introduces professional and ethical issues involved in individual counseling. Emphasizes the therapeutic relationship, effective listening, issues surrounding defense mechanisms, and crisis intervention. Prerequisite: Psy. 111Q.

316. Industrial Psychology. (3). General education further studies course. An introduction to the many roles of scientific psychology in the selection, training, evaluation and general welfare of people in the workplace. Includes employee morale, job satisfaction, leader behavior, fair employment practices and sources of worker stress. Prerequisite: Psy. 111Q.
322. Cognitive Psychology. (3). General education further studies course. Presents a coherent picture of human memory and cognition within the framework of the information-processing approach. This approach views the individual as an active, constructive planner in remembering and organizing new and prior learned knowledge. Includes the study of attention, memory, thought, decision making and problem solving processes. Prerequisite: Psy. 111Q.

324Q. Psychology of Personality. (3). General education further studies course. An examination of personality, trait and other contemporary theories of human personality. Gives consideration to major factors influencing personality, results of research in the area, ways of assessing personality and some of the methods of treating personality disorders. Presents and discusses case studies. Prerequisite: Psy. 111Q.

326. Introduction to Group Counseling. (3). Surveys contemporary theories and techniques of group counseling. Includes a comparison of varying group leader roles and styles and discussion of different types of counseling groups and their functions. Also includes a discussion of factors and processes in group counseling. Prerequisite: Psy. 111Q.

332. Psychology of Perception. (3). General education further studies course. An exploration of current research and theory in perception and sensation. Focuses on how organisms come to perceive and understand their environments with regard to perception of space, form, objects and events. Also gives consideration to motivation and personality factors in perception. Prerequisite: Psy. 111Q.

334Q. Developmental Psychology. (3). General education further studies course. Descriptive survey of human development from conception to death emphasizing the interplay of environmental, genetic and cultural determinants of development. Selected topics emphasized and elaborated by discussions and class projects. Prerequisite: Psy. 111Q.

336. Alcohol Use and Abuse. (3). General education further studies course. A study of the individual, social and cultural aspects of alcohol use. The class is designed to explore the problem of alcoholism for those who drink, problems of prevention of problems linked to alcohol use, treatment of alcoholism and the needs of special populations. Includes investigation of combined alcohol and drug abuse as well as study of psychosocial aspects of use of drugs and alcohol. Prerequisite: Psy. 111Q.

342Q. Psychology of Motivation. (3). General education further studies course. Examines the psychological and biological forces leading to goal-directed acts and understanding the complexity of influences upon behavior. Motivational topics include reward and punishment, stress, aggression, achievement and the role of the brain in motivation. Also includes organized behavior. Prerequisite: Psy. 111Q.

356. Human Factors Psychology. (3). The study of how people respond to the demands of complex machines and the varied environments of workplace, home and other settings. Course introduces the tools and methods of machine, task and environment design to achieve the matching of human capabilities and the demands of machines and environments so as to enhance human performance and well being. Prerequisite: Psy. 111Q.

401. Psychological Statistics. (3). Introduces basic quantitative techniques for the description and measurement of behavior, as well as tests for making decisions regarding the compatibility of data to scientific hypotheses. Covers probability models, t, chi square and F. Prerequisites: Psy. 111Q and Math. 111 or 112.

402. Psychology of Consciousness. (3). General education further studies course. Examines consciousness from two perspectives: as a psychological state ranging from comas to "peak experiences" and as a framework for knowledge. Covers research on split-brains and dissociated personalities from the second perspective. Prerequisite: Psy. 111Q.

404. Psychology of Aging. (3). General education further studies course. Cross-listed as Ger 404. An examination of the issues surrounding the adult aging process. Includes personality and intellectual changes, mental health of the elderly and the psychological issues of extending human life. Special emphasis on the strengths of the elderly and prevention of psychological problems of the elderly. Prerequisite: Psy. 111Q.

406. Introduction to Community Psychology. (3). General education further studies course. A review of the historical, theoretical and empirical bases of community psychology and community mental health. Presents contemporary models of community psychology including the ecological and social action perspectives. Includes social support, self-help, social policy and the prevention of psychosocial problems. Prerequisite: Psy. 111Q.

411. Research Methods in Psychology. (4). 3R; 3L. Covers the philosophy of research methods, experimental designs, appropriate data techniques, data interpretation, and developments in experimental psychology. The laboratory exposes students to representative experimental lab techniques in the major subdivisions of psychology. Actively involves all students in research project(s). Prerequisite: Psy. 401.

414. Child Psychology. (3). General education further studies course. Covers psychological development from conception through infancy and childhood. Includes the development of language, perceptual and cognitive functioning, social-emotional attachment and socialization. Attention to practical issues of discipline and child rearing. Prerequisite: Psy. 111Q.

416Q. Psychology and Problems of Society. (3). General education issues and perspectives course. A study of the special role of psychology theories in social problems and its application to contemporary social issues and problems including environmental concerns, problems in the schools, substance abuse, nuclear proliferation, racism/sexfism, child abuse, juvenile delinquency, aggression, behavioral control, aging, technology, etc. Prerequisite: Psy. 111Q.

426. Psychology of Work. (3). Selects from standard topics of industrial psychology; examines in greater depth the seriousness of job satisfaction problems, effects of technological change, membership in unions, control of productive workers, facts and myths about the working woman and other similar topics. Prerequisite: Psy. 111Q.

428. Field Work in Psychology. (3). Special projects and practicums under supervision in public and/or private agency settings. Psychological study, observation, research and/or research may be undertaken with prior approval by the department. Repeatable for a maximum of six credit hours, but only three hours may be earned per semester. Offered Cr/NC only. Prerequisites: Psy. 111Q and departmental consent.

451. Cooperative Education. (1-3). Provides practical experience, under academic supervision, that complements the student's academic program. Consultation with and approval by an appropriate faculty sponsor are necessary. Offered Cr/NC only.

Course Schedule

Courses for Graduate/Undergraduate Credit

502Q. Comparative Psychology. (3). Compares and contrasts psychological and ethological analyses of behavior. Stresses the evolution and development of behavior. Includes a critique of the instinct doctrine and sociobiological interpretations of behavior. Field trips supplement lectures. Prerequisite: one course from Group One.

508. Psychology Tutorial. (3). Selected topics in psychology. Repeatable for a maximum of six hours' credit. Instructor's consent may be required. Check Schedule of Courses. Prerequisite: Psy. 111Q.

512. Primatology. (3). General education further studies course. A survey of the primates (including humans) and their behavior. Includes principles of evolution and taxonomy, the transition to Homo sapiens, the evolution of behavior, the development of language, learning in the primates and the development of behavior. Prerequisite: Psy. 111Q.

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 life style and behavior in relation to health and illness. Prerequisite: Psy. 111Q.

516. Drugs and Human Behavior. (3). General education further studies 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. 111Q.
568. Computer Applications to the Behavioral Sciences. (3). 2R; 2L. Introduces computer applications to the behavioral sciences including: 1) techniques of analyzing experimental data, 2) statistical applications, 3) interactive computing, 4) "canned" statistical programs, 5) word processing and 6) other current computer applications. Prerequisites: nine hours in the social sciences.

810. Advanced Research Methods I. (4). 3R; 3L. Part one of a two-course sequence aimed at advanced treatment of statistical and research design issues. Statistical methods included are analysis of variance, analysis of covariance, multiple comparisons and multiple regression. Design issues include research planning, validity, quasi vs. experimental design, prediction vs. explanation and modeling. The associated lab provides basic computer skills for access to the mainframe and some basic training in SPSS-X, SAS and BIOMED statistical routines. Prerequisite: Psy. 810 and instructor's consent.

812. Biological and Philosophical Foundations of Psychology. (3). Develops the idea that psychology is a biosocial science. Accordingly, exposes 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.

813. 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. Also examines the resource of the main issues and theoretical questions investigated in the psychology of learning and cognition. Provides a basic understanding of classical and instrumental conditioning, and the cognitive processes of memory, language, speech, thought, decision making and problem solving. Prerequisite: instructor's consent.

814. Personality and Individual Differences. (3). Provides an advanced understanding of the theories and measurement of personality and individual differences. Also discusses the utilization of this information to an applied psychological setting. Prerequisite: instructor's consent.

815. 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 and developmental aspects 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 cognitions, affiliation and attachment, socialization and interpersonal interaction, social support and social roles and contexts over the life span. Considers applications of theories and research in social-development psychology to the solution of individual and social problems. Prerequisite: instructor's consent.

820. 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.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisites</th>
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<tbody>
<tr>
<td>911</td>
<td>Graduate Research. (1-3). Individual Enviornment FIt, Social Impact Principles of Individual Behavior, and Graduate Standing.</td>
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<tr>
<td>843</td>
<td>Seminar in Psychotherapy. (3). Provides an in-depth description and critical analysis of the history of psychotherapy, and an exploration of the role of the therapist in the therapeutic process.</td>
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<td>910</td>
<td>Internship in Human Factors Psychology. (1-3). Repeatable up to 6 hours. A planned placement experience in a off-campus setting, designed to give the doctoral human factors psychology student an opportunity to apply the principles of Human Factors Psychology. Prerequisite: advisor's consent.</td>
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<tr>
<td>920</td>
<td>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. Prerequisite: completion of undergraduate course in cognitive psychology or Psy. 813; and instructor's consent after interview for doctoral students from other disciplines.</td>
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<tr>
<td>840</td>
<td>Seminar in Environmental Psychology (3). Explores historical, theoretical, and empirical bases of environmental psychology. Presents contemporary models of environmental psychology including the ecological, social, community and human factors perspectives along with a historical review of the field. Could include behavior-environment congruence, person-environment fit, social impact assessment, social policy and the prevention of psychosocial problems through environmental intervention. Prerequisite: Psy. 830.</td>
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<tr>
<td>841</td>
<td>Seminar in Motivation and Emotion. (3). Intensive study of theory and research in motivational and emotional processes. Prerequisite: instructor's consent.</td>
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<tr>
<td>842</td>
<td>Seminar in Psychology of Learning. (3). Intensive study of theory and research in learning processes. Includes the study of principles of individual behavior and some of the variables of which it is a function as illustrated by respondent and operant conditioning along with some areas of application. Prerequisites: Psy. 302 and instructor's consent.</td>
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<tr>
<td>843</td>
<td>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 in specific behavioral and emotional issues in psychotherapy, such as process and outcome, and client and therapist variables in the therapeutic process. Prerequisites: Psy. 111Q and instructor's consent.</td>
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<tr>
<td>918</td>
<td>Doctoral Dissertation. (1-3). Graded S/U only. Repeatable for credit. Prerequisite: admission to candidacy and instructor's consent.</td>
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<tr>
<td>911</td>
<td>Graduate Research. (1-3). Individual research. Prerequisites: advisor's consent and graduate standing.</td>
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<td>921</td>
<td>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.</td>
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<td>931</td>
<td>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 a discussion of different data collection strategies used to assess community needs. A variety of topics related to program evaluation are explored including research design issues, developing criteria of merit, and the politicization of program evaluation. Prerequisite: instructor's consent.</td>
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<td>831</td>
<td>Seminar in Community-Clinical Psychology II. (3). Introduces methods of assessment and intervention used to promote human functioning in the contexts of primary and secondary prevention and clinical treatment of human psychosocial problems. Describes and integrates theories and methods relevant to the assessment of persons, environments, agencies and communities. Details theories and methods of intervention, including psychotherapy, consultation, social action and organizational development. Students apply these theories and methods to selected psychosocial problems. Prerequisite: instructor's consent.</td>
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<td>919</td>
<td>Internship in Community-Clinical Psychology I. (1-3). Graded S/U only. A planned placement experience in an off-campus setting, designed to give the doctoral student in clinical psychology an opportunity to further develop and apply skills in community-clinical psychology. Repeatable for a maximum of nine credit hours. Prerequisite: advisor's consent.</td>
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<td>930</td>
<td>Practicum in Clinical Psychology. (1-3). Gives 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. Prerequisite: instructor's consent.</td>
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<tr>
<td>931</td>
<td>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.</td>
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<td>935</td>
<td>Seminar in Cognitive-Behavioral Assessment. (4). Surveys issues of reliability and validity; provides description, critical analysis and practice in clinical use of such psychological assessment methods as interview, observation, self-report and standardized intelligence and personality tests. Focuses upon comprehensive clinical assessment and interpretation and reporting of assessment data for treatment planning. Prerequisite: instructor's consent.</td>
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<td>937</td>
<td>Seminar in Community and Organizational Intervention. (4). Graded S/U. 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 research from community psychology, community psychology, public health, health psychology, and applied social psychology. Intended to help 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.</td>
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<td>938</td>
<td>Seminar in Prevention. (3). Reviews the historical, theoretical and empirical bases of prevention psychology. Presents contemporary models of prevention psychology including the field of environmental psychology. This course may include prevention, empowerment, community-based prevention, self-help, social policy and the prevention of psychosocial problems through environmental intervention. Prerequisite: instructor's consent.</td>
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<td>940</td>
<td>Development of Abnormal Behavior. (3). A consideration of 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 prevention, intervention, and change. Prerequisite: instructor's consent.</td>
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<td>941</td>
<td>Measurement of Human Performance. (3). The logic of fundamental measurement is developed and applied to human performance from an introduction to decision making, to the development of the Signal Detection Theory (SDT) and how it is measured. Demonstrates the procedures for assessing both detection and discrimination.</td>
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under both SDT and threshold theory. Information measurement and utility theory is developed and applied to the transmission and coding of information and to decision making respectively. Examines measures of work reliability and well-being. Prerequisite: instructor's consent.

942. Seminar in Behavioral Development. (3). A critical analysis of the concept of development and of theories of behavioral development. Begins with a review of the concept of integrative levels and proceeds to a discussion of modern evolutionary thought. Examines the concept of development from psychological, biological and anthropological perspectives. Also critically evaluates various theories of human development. Prerequisite: instructor's consent.

943. Seminar in Comparative Psychology. (3). Intensive study of psychological and ethnological research and theories of behavior. Oriented around the evolution and development of behavior. Includes a review of the concept of integrative levels in psychology. Prerequisites: Psy 502Q and instructor's consent.

944. Seminar in Consultation. (3). Examines theories and techniques of psychological consultation as applied to individuals, organizations, and systems. Prerequisite: instructor's consent.

945. Seminar in Current Developments. (3). Intensive study of current issues, techniques, research and application. Repeatable for different topics for a maximum of six hours. Prerequisite: instructor's consent.

946. Seminar in Motor and Sensory Processes. (3). Focuses on the interface between human sensory and motor systems. Covers the sensory, motor, cognitive, and affective processes as related to human factors psychology. After a survey of the anatomy and physiology of sensory-motor systems, emphasis will be placed on contemporary research and literature regarding the interface of sensory-motor processes. Prerequisite: instructor's consent.

947. Seminar in Perception. (3). Intensive study in theory and research in perceptual processes. Prerequisites: Psy 332, or equivalent, and instructor's consent.

Public Administration

See Urban and Public Affairs, Hugo Wall School of.

Religion

The study of religion offers students an opportunity to inform themselves about the major religious traditions of the world and to think critically and constructively about religion as a dimension of human experience and a mode of human expression. The curriculum includes courses on major religious traditions, significant issues in religion, and methods of studying religion.

The Bachelor of Arts degree in religion was phased out beginning in 1987; however, students presently enrolled in the program will be accommodated. An emphasis in religion is available through the general studies program and a minor in religion is possible.

Students contemplating an emphasis or minor in religion should discuss their academic program with a member of the department. A Bachelor of Arts degree field major provides an additional option.

Minor. A minor in religion requires a minimum of 15 hours. A maximum of six may be taken at the 100 level.

Lower-Division Courses


120Q. The Biblical Heritage. (3). The collection of books known as the Bible has been central to a number of religious traditions for more than 2,000 years. Course examines the central religious ideas and motifs of Biblical literature and then proceeds to study how the Jewish and Christian traditions have interpreted those ideas and molded them in various forms and combinations. Course is historical and analytic not confessional; culminates with a survey of the roles played by the Bible in contemporary American culture.

125. World of the Bible. (3). Seeks to understand the Bible within its geographical, historical and religious context—the polytheistic world of the ancient Near Eastern and Mediterranean civilizations of Babylon, Assyr, Egypt, Persia, Greece and Rome from the period of the patriarchs to the rise of Christianity. Special attention to similarities and differences between Biblical ideology and views current in neighboring religious traditions.

130Q. Introduction to Religion. (3). An introduction to the major religious traditions and problems, both Eastern and Western, with some emphasis on the methods used in the study of religion.

>131G. Traditional Religion and the Modern World. (3). General education introductory course. A study of some of the traditional religious systems (Buddhist, Hindu, Confucian, Tan, Judaic, and Christian) and of several of the important modern criticisms of religion with a view to confronting the problem of whether traditional religion can be significant in the modern world.

150. Workshop in Religion. (2-4).

210. Current Religious Issues. (3). A critical study of contemporary issues in the West with some attention to non-Western religions. Considers the relationship of religion to such topics as race, war, secularism, population explosion and politics.

215. The Meaning of Death. (3). An exploration of the images, interpretations and practices that constitute the response to death in major religious traditions.

221. Judaism. (3). The history and central teachings of traditional Judaism and its modern varieties (Reform, Orthodox, Conservative, etc.). Focuses on Jewish customs and practices as well as Jewish religious thought.

222Q. East Asia. (3). Cross-listed as LAS-I 222Q. Hist. 222, Pol. S. 222Q. General education introductory course. A survey of basic topics on China, Korea and Japan, including history, culture, society, philosophy, religion, politics and economics. Taught by a team of instructors from several departments.

223. Hinduism and Buddhism. (3). Hinduism and Buddhism are closely related, both growing out of a unique critical period in the history of India's ancient Vedic tradition. The world view from which they arise is sharply different from that which has been characteristic in the West; one of its consequences has been the direct investigation of consciousness by sophisticated meditation techniques, a type of religiosity for which India has become famous. Course investigates the formation of that world view and explores the diverse ways in which it has been elaborated and interpreted as a way of life and path of spiritual cultivation in the Hindu and Buddhist tradition.

224Q. Christianity. (3). An overview of Christianity from New Testament times to the present stressing historical developments in religious life and theology. Includes Catholic, Protestant and Orthodox Christianity; explores contemporary trends and problems.

225. Jesus. (3). There have been varied responses to and multiple interpretations of the life and teaching of Jesus. Course examines the development and function of traditions about Jesus in biblical, extrabiblical and more recent, popular sources.

230. Religion in America. (3). A survey of the beliefs, practices and issues current in major American religious bodies with some attention to minor religious denominations such as the Black Church, Christian Science and the Latter Day Saints.

235. Islam. (3). The religion in its geographical, social, political and cultural context, both Arab and non-Arab.

250Q. Eastern Religions. (3). An introduction to the religions of India and China. Studies and contrasts Hinduism, Buddhism, Jainism, Taoism and Confucianism. Attempts to understand the religious life and texts of these ancient and dynamic cultures from the vantage point of the believers themselves.

255. Zen and Taoism. (3). Zen is a form of Buddhism that emphasizes spontaneity and the ultimate of the here and now, employing startlingly nonintellectualist methods to free minds of the routine world of distinctions, plurality and linear time. It represents a vision that is at once Buddhist and deeply Chinese; its most distinctive features may in fact be best understood as a Buddhist development of ideas, values and orientations found in China's
ancient Taoist tradition. The Taoist view of the universe as a harmonious organic unity in which humans fittingly participate by selless spontaneity rather than calculated intervention is radicalized in Zen; at the same time, it is the Taoist sensibility that leads to the Zen departure from more traditional Buddhist approaches to enlightenment. Course traces these developments, beginning with a consideration of Taoism and then tracing the transformation of Buddhism in China to its culmination in the unique methods and teachings of Zen.

260Q. Psychic Phenomena. (3). Spiritual traditions have everywhere and at most times appeared in a triple world: natural, divine and intermediate. The intermediate world of the psychic, the occult, the astral, is the subject of philosophical/psychological investigation. Includes psychic out-of-body states, ESP, clairvoyance, telepathy, ethereal bodies in Hinduism and the Tibetan Bardos. Lecture, discussion and student reports. Visits by persons with expertise in psychic reading, out-of-body states, Kirlian photography and ESP.

280. Special Studies. (3). A concentrated examination of a significant figure, event or issue in religion or the study thereof. Repeatable for credit. Prerequisite: departmental option.

281. Cooperative Education. (1-4). Offered Cr/NCR only.

Upper-Division Courses

311. Old Testament Topics. (3). An in-depth study of a major facet of the religion of the Hebrew Bible, such as prophecy, law, covenant, historiography and wisdom, or a genre of biblical literature, such as poetry or narrative.


323. Protestantism. (3). Traces the development of the Protestant Christian tradition and analyzes its distinctive themes. After a historical survey of this family of Christianity, course explores distinctively Protestant themes, such as justification by faith, the primacy of individual conscience and the primacy of scripture, integrating them with current phenomena.

327. Magic, Witchcraft and Religion. (3). Cross-listed as Anthr. 327. An examination of various concepts concerning the realm of the supernatural as held by various peoples around the world. Relates such religious beliefs and the resultant practices to the larger patterns of cultural beliefs and behaviors.

333Q. Women and Religion. (3). Cross-listed as Wom. S. 333. An examination of past and present images and roles of women in religious traditions. Looks at women in the Bible and religious history as well as contemporary criticisms of patriarchal religion and resources for change.

346. Philosophy of Religion. (3). Cross-listed as Phil. 346Q.

364. Zionism and Israel. (3). An examination of the national element in Judaism and the movement that has arisen in relationship to this nationalism in the 19th and 20th centuries. Concludes with an investigation into the relationship between Zionist ideals and the modern state of Israel.

400Q. Comparative Religion. (3). An observation and analysis of the patterns found in the characteristic religious phenomena (e.g., myths, symbols, rites, institutions), with a view to a systematic understanding of human religious life as it has expressed itself throughout history.

419. Modern Atheism. (3). An examination and critical evaluation of some of the seminal critiques of religion in general and Christianity in particular that have been produced in the modern world. Includes selections from such figures as Spinoza, Voltaire, Feuerbach, Marx, Nietzsche, Freud and Camus.

421. Sociology of Religion. (3).

442. Greek and Roman Religion. (3). The transformations in the religions of the Mediterranean world and the Near East between the conquests of Alexander the Great and the Triumph of Christianity under Constantine. Covers the traditional forms of Greek and Roman religion, the impact of Greek culture and religion on the East after Alexander, the mystery religions, the spread of oriental cults in the Roman Empire, Gnosticism, astrology and the development of Christianity within the Roman Empire. At its most inclusive level, course deals with the religious development lying at the basis of Western civilization: the fusion of Jewish, Greek and Roman patterns of thought in the Christian world of antiquity.


480. Special Studies. (3). A concentrated study of a theologian, a theorist of religion or a religious issue announced by the instructor when course is scheduled. Repeatable for credit. Prerequisite: instructor's consent.

481. Cooperative Education. (1-4). Offered Cr/NCR only.

490. Independent Work. (1-3). Designed for the student capable of doing advanced independent work in a specialized area of the study of religion that is not formally offered by the department. Repeatable for credit. Prerequisite: departmental consent.

Courses for Graduate/Undergraduate Credit

750. Workshop in Religion. (2-4).

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

See Urban and Public Affairs, Hugo Wall School of.

Sociology

A major in sociology provides students with an understanding of human behavior in personal relations such as the family and friendships and how human behavior is affected by larger societal influences such as the economy, bureaucracies, and social problems. This understanding is useful in such fields as human services, business, and law.

Students may choose the standard major which allows for personally tailored specialization, or they may elect to enroll in the emphasis in human development which has a more applied focus. Both programs prepare students to pursue a career upon graduation and/or enter a graduate program in sociology. Students must take at least nine hours in residence for a major and six hours in residence for a minor.

Major. A major in sociology consists of at least 30 hours, including:

Course Hrs.
Soc. 111Q, Introduction to Sociology ........ 3
Soc. 312, Introduction to Social Research 3
Soc. 501, Sociological Statistics .............. 3
Soc. 512, Measurement and Analysis ........ 3
Soc. 545, Sociological Theory ................. 3

Certain courses in related departments that meet the particular needs of the students and approved by their advisors may be counted toward a sociology major. No more than six hours of such courses may be included.

Minor. A minor in sociology consists of at least 15 hours, including:

Course Hrs.
Soc. 111Q, Introduction to Sociology ........ 3
At least 6 hours of courses, 500+............. 6

Emphasis in Human Social Development. Students in sociology may complete a special emphasis in human social development. Courses included in this emphasis are:

Course Hrs.
Required Core.....................................15
Soc. 111Q, Introduction to Sociology .... 3
Soc. 312, Introduction to Social Research ................. 3
Soc. 501, Sociological Statistics ........ 3
Soc. 512, Measurement and Analysis .... 3
Soc. 545, Sociological Theory ............ 3
Option Courses .................................. 12
Soc. 220Q, Contemporary Social Problems or Soc. 322, Deviant Behavior ........ 3
Soc. 111Q, Courtship and Marriage or Soc. 515, Sociology of the Family. (3) Course is flexible to a wide range of topics: family relations, religious work relations, recreational and leisure activities, education experiences, child and adult socialization, interpersonal relations in public and private settings, urban/rural living and fads and fashions. Course is flexible to allow students to explore, in depth, their own unique life experiences within a sociological framework.

111Q. Introduction to Sociology. (3) General education introductory course. Introduces basic concepts, propositions and theoretical approaches of sociology, including elementary methods of studying social phenomena. The basic course for students who intend to take additional courses in sociology.


Upper-Division Courses

>301. Computers and Society. (3) General education further studies course. Two major objectives: (1) to examine the interactions between humans and microcomputers and (2) to study the effect of microcomputers upon social interaction and stratification within society. In particular, course focuses upon the work setting and the family. Includes new social roles (programmer, hacker, the cyberphobic the cyberphile); the computer as a family member; the computer as a power vendor in the work setting; computer deviance; and the computer and the disadvantaged. Utilizes a cross-cultural and historical perspective where appropriate.

312. Introduction to Social Research. (3) Generally offered fall semester only. A survey of the many research techniques found in sociology and related fields. Stresses conceptual understanding of all phases of the research process. Prerequisite: Soc. 111Q.

315Q. Courtship and Marriage. (3) General education further studies course. Emphasizes courtship and marriage processes as they exist in the United States today. Aids students in the acquisition of a sociological perspective of the courtship process through an examination of social class, sex roles, dating and human sexuality. Emphasizes marital interaction, parenthood, marital dissolution and the future of marriage in the latter half of the course.

316. The American Male. (3) General education issues and perspectives course. Cross-listed as Wom. S. 316. Examines the male role in America from a variety of sociological perspectives and within particular settings, for example, the workplace, family and leisure. Other relevant topics: socialization, values and beliefs and adult development stages and crises. Discusses changing male roles produced by strains and conflicts in contemporary America.


>322. Deviant Behavior. (3) General education further studies course. The structure, dynamics and etiology of those behaviors that are integrated around systematic violations of the conventional norms. Focuses on deviant role processes and the major deviant social groups facing couples as they move through the family life cycle. Covers the decision to have children, remaining childless, the transition into parenthood, parent-child relationships, families of origin and the transition from active parenthood. Also includes single parents, divorced, step-parenting and dual-career parents. Discusses several different parenting techniques and styles as well.

>325. Parenting. (3) General education further studies course. Examines the role of parent in American society from a number of different perspectives. Focuses on the major developmental changes facing couples as they move through the family life cycle. Examines the decision to have children, remaining childless, the transition into parenthood, parent-child relationships, families of origin and the transition from active parenthood. Also includes single parents, divorced, step-parenting and dual-career parents. Discusses several different parenting techniques and styles as well.

330Q. Social Inequality. (3) General education further studies course. An analysis of statistical and social causes of social class, sex roles, dating and human sexuality. Emphasizes marital interaction, parenthood, marital dissolution and the future of marriage in the latter half of the course.

334. Sociology of the Community. (3) General education further studies course. An exploration of a basic unit of social organization, the community. Emphasizes organizational and interpersonal relationships within the community and changes in those relationships, as well as the community's place within society. Prerequisite: Soc. 111Q.

336. Work in Modern Society. (3) General education further studies course. Cross-listed as Soc. 516. Sociology of Sex Roles. Broad overview of work in the modern economy. Examines the historical development of industrial-based capitalism, both the organizational level changes and relations between management and labor. Also examines from a sociological perspective industrial and occupational level data focusing on changes in work environments, occupational and industrial opportunities, demographics of work occupants, and changes in compensation and work status.

338Q. Health and Lifestyle. (3) General education further studies course. Views health as a social characteristic which is defined and influenced by social processes. Studies the social resources for health which exist in social class, marriage and marital status. Considers changing social standards for health and the stigma given to poor health. Examines socially created risks to health and organized efforts to change unhealthy environments. Investigates the medicalization of society. Prerequisite: Soc. 111Q or departmental consent.

350. Social Interaction. (3) General education further studies course. Studies the emphasis with attraction between humans and microcomputers and (2) to study the effect of microcomputers upon social interaction and stratification within society. In particular, course focuses upon the work setting and the family. Includes new social roles (programmer, hacker, the cyberphobic the cyberphile); the computer as a family member; the computer as a power vendor in the work setting; computer deviance; and the computer and the disadvantaged. Utilizes a cross-cultural and historical perspective where appropriate.

481. Cooperative Education in Sociology. (1-4). Provides the student with practical experience under academic supervision, that complements the student's academic program. Consultation with and approval by an appropriate faculty sponsor are necessary. Prerequisite: Soc. 111Q or departmental consent.

Courses for Graduate/Undergraduate Credit

501. Sociological Statistics. (3) Generally offered fall semester only. Application of descriptive and inferential statistics to sociological problems. Includes measures of central tendency, dispersion and association, simple linear regression, hypothesis testing and analysis of variance. Prerequisites: Soc. 111Q, Soc. 212 or 312, Math. 111 or 331Q or equivalent.

512. Measurement and Analysis. (3) General education further studies course. Studies the effect of social interaction influences their daily activities. Includes the meaning and importance of the symbol; the nature and development of self; social roles and their influence on individuals and the construction of society. Prerequisite: Soc. 111Q.

513. Sociology of Aging. (3) General education further studies course. A study of the emphasis with attraction between humans and microcomputers and (2) to study the effect of microcomputers upon social interaction and stratification within society. In particular, course focuses upon the work setting and the family. Includes new social roles (programmer, hacker, the cyberphobic the cyberphile); the computer as a family member; the computer as a power vendor in the work setting; computer deviance; and the computer and the disadvantaged. Utilizes a cross-cultural and historical perspective where appropriate.

515. Sociology of the Family. (3) General education further studies course. Analysis of American family behavior, including the selection of marriage partners, the husband-wife and parent-child relationships and the relation of these patterns of behavior to other aspects of American society. Prerequisite: Soc. 111Q.
516. Sociology of Sex Roles. (3). General education further studies course. Cross-listed as Wom. S. 516. Analyzes the institutional sources of man's and woman's roles, the source of changes in these roles, the consequent ambiguities and conflicts. Prerequisite: Soc. 111Q.

517. Intimate Relations. (3). General education further studies course. 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. 111Q.

520. Family and Aging. (3). Cross-listed as Ger. 520. An analysis of the families and family systems of older people. Special emphasis on demographic and historical changes, widowhood, caregiving and intergenerational relationships as these relate to the family life of older people. Prerequisite: Ger. 100 or Jr. standing.

523. Sociology of Law. (3). General education further studies course. A consideration of 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. 111Q.

527. Violence and Social Change. (3). General education further studies course. The analysis of the causal processes and functions of extreme and violent political behavior, i.e., revolutionary, insurrectionary and protest movements. Includes an analysis of consequences for social change. Prerequisite: Soc. 111Q.

534. Urban Sociology. (3). General education further studies course. Urban population organization and institutions and programs of city planning. Prerequisite Soc. 111Q.

537. The Social Consequences of Disability. (3). General education further studies course. Cross-listed as Ger. 537. 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. 111Q.

538. Medical Sociology. (3). General education further studies course. An analysis of 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. 111Q.

539. Juvenile Delinquency. (3). General education further studies course. The factors related to juvenile delinquency and the measures of treatment and prevention. Prerequisite: Soc. 111Q.

540. Criminology. (3). General education further studies course. The extent and nature of criminal behavior and societal reactions to it. Prerequisite: Soc. 111Q.

543. Contemporary Corrections. (3). Historical and contemporary programs for the treatment of offenders viewed as societal reactions to criminal behavior. Prerequisite: Soc. 539 or 540.

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. Prerequisites: 9 hours of sociology.

598. Internship. (1-6). Supervises persons involved in internships or placements in the community where credit can be given. Prerequisite: departmental consent.

600. Selected Topics in Sociology. (3). Study in a specialized area of sociology emphasizing student research projects. Includes deviant behavior, political sociology, the family and others. Repeatable for a maximum of six hours credit. Prerequisites: Soc. 111Q, instructor's consent and substantive area course.

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.

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.

750. Sociology Workshop. (1-3). Provides specialized instruction using a variable format, in a sociologically relevant subject.

781. Cooperative Education in Sociology. (1-4). Provides practical experience, under academic supervision, that complements the student's academic program. Consultation with and approval by an appropriate faculty advisor are necessary. Graded CR/NC only.

*Criminal may be waived with departmental consent.

Courses for Graduate Students Only

812. Advanced Research Methods. (3). Provides graduate students with practical experience addressing sociological questions with available data. This experience involves deciding on a research topic, developing an appropriate literature review, performing data analysis and presenting a written and oral report of the overall project. Students should develop an understanding of the strengths and limitations of empirical research. Prerequisite: Soc. 512.

815. Seminar on the Family. (3). Review of recent research on the family and the theoretical implications thereof. Prerequisite: Soc. 515 or departmental consent.

820. Seminar in Social Movements. (3). Analysis of the elements in social movements as factors in social and cultural change. Prerequisite: departmental consent.

822. Seminar in Deviant Behavior. (3). In-depth examination of recent theory, methods and research in the area of deviance. Includes implications of future theory development. Prerequisite: departmental consent.

825. Seminar in Organizational Analysis. (3). Exploration of selected problems in organizational theory based on major theoretical and empirical approaches, both classical and contemporary. Prerequisite: departmental consent.

830. Seminar in Stratification and Power Structure. (3). Exploration of selected problems in organizational theory based on major theoretical and empirical approaches, both classical and contemporary. Prerequisite: departmental consent.

834. Seminar in Urban Sociology. (3). Independent research projects in urban sociology. Prerequisite: departmental consent.

845. Seminar in Sociological Theory. (3). Emphasizes continuities between European and American social theory. The perspective is both historical and analytical spanning the 18th, 19th and 20th centuries and concluding with the works of representative contemporary theorists. Prerequisite: Soc. 545 or departmental consent.

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 six hours. Prerequisites: 15 hours of sociology and departmental consent.

851. Directed Research. (1-3). For the advanced student who wants to achieve research competence in a specific area. Each student is directed by a member of the graduate faculty in the development of a project in research not leading to thesis research. Prerequisites: Soc. 812 and instructor's consent.

860. Proseminar—Teaching Sociology. (1). Exposes students to the components of the academic role of a sociologist. Prerequisite: graduate student status.

870. Independent Reading. (2-3). Advanced systematic reading in a topical area under the tutorship of a member of the graduate faculty. Repeatable for credit not to exceed six hours. Prerequisite: departmental consent.

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 enhances the University's ability to respond to its urban mission through the cooperative efforts of the academic units and centers which comprise the new school. The school, created in 1993, includes criminal justice, gerontology, minority studies, public administration...
presentation, integrity, and social work academic programs. Additionally, the Midwest Criminal Justice Institute (MCJII), Kansas and Nebraska Regional Community Policing Training Institute, Institute for Communities and Government, and the Kansas Public Finance Center provide opportunities to blend teaching, research, and service. As a result, the Hugo Wall School 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.

Each academic unit defines the assessment procedure for their degree program and students are informed of this procedure in the year prior to degree completion.

The Hugo Wall School of Urban and Public Affairs offers the following courses used in the undergraduate and graduate curricula by the academic programs within the school.

Upper-Division Courses

- **301. Computer and Statistical Applications in Urban and Public Affairs. (3)** Introduces computer and statistical applications used in public agencies. Emphasizes availability and use of data sources, quantitative decision-making techniques, and interpretation of statistical analyses. Prerequisite: Math 111 or equivalent.

- **307. Introduction to Research in Urban and Public Affairs. (3)** Introduces research methods emphasizing the methods most commonly used in urban and public affairs. Includes library and reference materials, government documents, and legal materials. Prerequisite: an introductory class in one of the disciplines within the Hugo Wall School.

Course for Graduate/Undergraduate Credit

- **501. Integrity in Public Service. (3)** Explores 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. Emphasizes case studies, developing critical thinking and analytical skills regarding ethical behavior; and become more personally and professionally responsible. Prerequisite: junior or senior level or instructor’s permission.

- **580. Workshop in Urban and Public Affairs. (1-3)** Specialized instruction using variable format in urban and public affairs relevant subject. Repeatable for credit.

- **597. Applied Research Methods in Urban and Public Affairs. (3)** Studies research methods including questionnaire construction, survey methods, experiential design, and report preparation. Emphasizes completion of an applied research project. Prerequisites: an introductory class and one or more advanced classes in one of the disciplines within the Hugo Wall School, and SUPA 301 or 307.

- **621. Environmental Law. (3)** An in-depth analysis of emerging federal, state, and local legislation; judicial decisions, and administrative policy 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 approved methods class.

- **651. Dispute Resolution. (3)** Topics include dispute causation, typologies, communication, mediation, arbitration, and other dispute resolution techniques. Includes criminal and victim mediation, both inter-group and inter-organization relations and dispute resolution techniques, and analysis of case studies.

- **750. Workshop in Urban and Public Affairs. (1-3)** Specialized instruction using variable format in urban and public affairs relevant subject. Repeatable for credit.

- **797. 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.

Course for Graduate Students Only

- **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. Prerequisites: graduate-level research methods class.

Criminal Justice

The Criminal Justice Program offers the Bachelor of Science and Master of Arts in criminal justice degrees. These degree programs are designed to provide preservice and inservice students with a broad educational background in all aspects of the criminal justice field. The Bachelor of Science degree program is described below.

Major. The major in criminal justice consists of at least 36 hours (but not more than 50 hours will count toward the BS degree) with at least 21 semester hours of upper-division course work in criminal justice. English 210 is an additional requirement to be taken during the first two semesters as a criminal justice major. Students who plan to graduate with a BS in Criminal Justice must also satisfy the Fairmount College of Liberal Arts and Sciences requirements (including the foreign language requirement) and the University requirements for the Bachelor of Science degree. The curriculum is divided into three areas:

1. **Core Courses:** CJ 191Q, 291, 292, 394, 497Q, 593, and SUPA 301, and 307 or 597.


3. **Group B:** CJ 381, 382, 481, 482, 483, 792, 793.

Students must complete the 24 hours of core courses and 12 additional hours from groups A and B. Nine of these 12 hours must be in Group A. The remaining 3 hours can be in Group A or Group B. Students may take 14 additional credit hours beyond the 36 hours which are required for the major (for a total of 50 hours). These hours can be in Group A or Group B with the following restrictions: there is a maximum of 6 hours in each of the following: 481, 482, or 483; and there is a maximum of 12 hours total in any combination of the following: 481, 482, and 483.

Minor. The minor in criminal justice consists of at least 18 hours of criminal justice courses, of which at least 6 hours must be at the upper-division level (300 and above). The following requirements must be met for the minor:

1. CJ 191Q

2. A minimum of two and a maximum of three of the following courses: CJ 291, 292, 394, and SUPA 307.

Important: students should plan the minor keeping in mind that some upper-division CJ courses have specific 200-level CJ courses as prerequisites.

Emphasis in Cross-Cultural Communications in Criminal Justice. The emphasis in cross-cultural communications in criminal justice is designed to provide learning experiences that will prepare practitioners to promote favorable interaction between criminal justice agencies and the minority groups they serve. This emphasis area attempts to prepare students to develop empathetic responsiveness, combined with humanistic insights, and to develop and maintain mutually dependent helping and working relationships between criminal justice agencies and a variety of minority groups.

Students majoring in criminal justice also may obtain the Certificate of Emphasis in Cross-Cultural Communications in
Criminal Justice in addition to the BS in Criminal Justice degree. Those students seeking this certificate must satisfactorily complete Min. S. 210Q and one of the following: Min. S. 331, 332, 333, or 334. Also, students must take 12 additional hours in minority studies course work, none of which must be in upper-division courses.

**Lower-Division Courses**

**CJ 191Q**, unless otherwise noted, is a prerequisite or corequisite for all 200-level criminal justice courses and a prerequisite for all upper-division criminal justice courses (300-level and above). SUPA 307, unless otherwise noted, is a prerequisite for all 400-level criminal justice courses.

**191Q. Introduction to Criminal Justice.** (3). Introduces crime and the criminal justice system by discussing the nature of crime and by identifying multiple facets of the justice system, including the police, the courts, and correctional agencies. Studies the role of the criminal justice system as it relates to the individual and to society. Students become acquainted with criminal justice careers.

**201. Introduction to Agency Administration.** (3). A survey of management models, administrative techniques and patterns of organizational structure characteristic of criminal justice agencies. Prerequisite or corequisite: **CJ 191Q**.

**291. Corrections.** (3). A survey course; presents an overview of the role, structure and function of the correctional system in American society. Emphasizes the principal aspects of both institutional and community-based corrections. Prerequisite or corequisite: **CJ 191Q**.

**292. Law Enforcement.** (3). An examination of the interaction of police and citizens as regulated by constitutional provisions and other legal and social constraints. Prerequisite or corequisite: **CJ 191Q**.

**Upper-Division Courses**

**310. Community-Based Corrections.** (3). Focuses on the analysis and evaluation of programs in community settings such as diversion, probation, parole, halfway houses, furlough, study release, work release, and restitution. Discusses programs in terms of their definition, history, purpose, administration/process, problems, cost, and effectiveness. Prerequisites: **CJ 191Q** and 291.

**315Q. Criminal Law.** (3). History, scope, and nature of law; parties to crime; classification of offenses; act and intent; capacity to commit crime; and defenses. Examines elements of major criminal statutes and an overview of criminal processes and rules of evidence.

**320. Criminal Procedure.** (3). Criminal procedure in the criminal justice system, including rights of accused, initiation of prosecution, rules of arrest, search and seizure, and the exclusionary rule.

**341. Criminalistics and Scientific Crime Detection.** (3). Studies the application of the natural sciences to assist law enforcement officers and the criminal justice system. Studies investigative procedures from the crime scene through laboratory analysis, to the presentation of evidence in court. Prerequisites: **CJ 191Q** and 292.

**343. Special Investigation.** (3). Care, collection, and preservation of evidence. Studies sources of information and locating subjects, crime scene recording, and investigative techniques applicable to specific offenses. Prerequisites: **CJ 191Q** and 292.

**351Q. The Victim in Criminal Justice.** (3). An examination of the relationship of crime victims to the criminal justice system. Consideration is given to the role of the victim in crime occurrences, as well as theoretical developments in the field.

**353. Organized and White Collar Crime.** (3). Surveys the history, scope, and impact of organized and white collar crime in America, areas of influence, remedial practices, and methods of legal control. Reviews the societal conditions involved in the appearance, spread, and expansion of organized and white collar crime in America and the overlap and interrelationship between corporate and business crime (white collar and organized crime). Emphasizes the processes of infiltration, fraud, and corruption that are characteristic of these conspiratorial crimes.

**355. Special Populations in the Criminal Justice System.** (3). Cross-listed as Min. S. 251Q. Examines the role of women and minorities as employees of the criminal justice system. Also explores the role of women, minorities, juveniles, and elder citizens as individuals who commit crime and are apprehended and sanctioned by the criminal justice system. Considers the unique challenges of each of the four identified populations, including their interactions with law enforcement, the judiciary, and corrections.

**381. Special Topics.** (1-3). Group project and inquiry through student investigation under faculty supervision of criminal justice topics including law enforcement, corrections, and the judicial process. Repeatable for credit, not to exceed a total of six hours. Prerequisite: instructor’s consent.

**382. Workshop in Criminal Justice.** (1-3). Workshop. Prerequisite: instructor’s consent.

**394. Courts and Judicial Systems.** (3). Consists of a case study approach of an individual defendant from the time the crime is committed through the defendant’s legal system (or actual homicide case in California). Includes legal analysis of the procedures and rules involved throughout the criminal justice process. Student plays the role of the decision maker for the law enforcement, court, and correctional agencies, resulting in an in-depth view of the adversary procedures which form the basis for the criminal justice system. Prerequisite or corequisite: **CJ 191Q**.

**Prerequisite note:** SUPA 307, unless otherwise noted, is a prerequisite for all 400-level and above CJ courses.

**401. Management of Criminal Justice Agencies.** (3). An intensive examination of a variety of emerging administrative and management concepts and the processes related to the determination and implementation of management philosophy. Prerequisites: **CJ 191Q**, 291, 292, and SUPA 307, or instructor’s consent.

**420. Criminal Evidence.** (3). Concepts of criminal evidence rules as they pertain to kinds and degrees of evidence—procedure for admitting or excluding evidence—witnesses and privileged communications; the hearsay rule and its exceptions; and judicial notice; burdens of proof, and presumptions. Emphasizes the rules of evidence that govern the criminal justice process. Prerequisites: **CJ 191Q**, 394, and SUPA 307.

**451Q. International Criminal Justice.** (3). Acquaints students with the structural and functional aspects of law enforcement agencies; court systems, correctional facilities, juvenile treatment, and crime prevention strategies employed by different societies throughout the world. Incorporates the role of the United Nations in the treatment of offenders and crime prevention. Prerequisites: **CJ 191Q** and SUPA 307.

**453. Crime Prevention.** (3). A study of the theories of crime prevention efforts by governmental and nongovernmental agencies. An analysis of factors which contribute to the reduction of crime; crime analysis and prediction; the methodology of gathering crime data; and the relationship between the criminal justice system and the public. Prerequisites: **CJ 191Q** and SUPA 307.

**481. Cooperative Education.** (1-6). Provides 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 and approved by the cooperative education coordinator. Prerequisites: criminal justice major, 15 hours of criminal justice courses, junior or senior standing and consent of the criminal justice agency. Offered Cr/NC only.

**482. Internship.** (3-6). Supervised field placement with a governmental or private law enforcement, court, correction, juvenile justice, forensic science or security agency. Provides a learning experience in which the student can integrate and apply knowledge and theory derived from the criminal justice curriculum. Interns work 96 hours for three credits; there is a minimum of six credit hours. Prerequisites: 15 hours in administration of justice, junior or senior standing, consent of the criminal justice agency and internship coordinator’s consent.

**483. Individual Directed Study.** (1-3). Study in a specialized area of the criminal justice system emphasizing the student’s research project. Repeatable for credit not to exceed a total of six hours. Prerequisites: 15 hours in the criminal justice core and individual directed study coordinator’s consent.
Gerontology courses

Hrs.
100Q, Introduction to Gerontology .......... 3
401, Aging, Work and Retirement .......... 3
404, Psychology of Aging .......... 3
501, Field Experience ............. 6
513, Sociology of Aging ........ 3
518Q, Biology of Aging .......... 3
560, Aging Network .......... 3

Students who have professional work experience in aging may, with faculty approval, substitute 3 hours of elective credit for the second 3 hours of field experience.

Required Research Courses. Gerontology majors also complete three hours in approved statistics courses and three hours in an approved research methods course.

Elective Courses. Students will enroll in 15 hours of elective course work in gerontology, including at least one course from each of the following four clusters.

Cluster I. Humanities. Geron. 514, Anthropology of Aging; Geron. 515, Women and Aging; Phil 327, Philosophy of Health Care.

Cluster II. Behavioral/Social Science. Geron. 512, Minority Aging; Geron. 520, Family and Aging; Geron. 715, Adult Development and Aging.

Cluster III. Physiology/Health. Geron. 537, Social Consequences of Disability; Geron. 550M, Long Term Care and Aging; HS 331Q, Principles of Dietetics and Nutrition; Soc. 538, Medical Sociology.


Minor. The minor in gerontology consists of at least 15 hours of gerontology courses, including Geron. 100Q and 560, and nine hours selected from the following: Geron. 401, 404, 513, and 518Q.

Lower-Division Courses

100Q. Introduction to Gerontology. (3). A multidisciplinary overview of the field of aging, with attention to cultural, social, psychological, biological and economic factors which influence the circumstances of the elderly.

150. Workshop in Gerontology. (1-3). Provides specialized instruction, using a variable format in a gerontologically relevant subject. Repeatable for credit.

Upper-Division Courses

401. Aging, Work and Retirement. (3). Examines the impact of population aging upon the nation; income and poverty among the elderly; retirement and work choices; the impact of lifetime income, Social Security, Medicare, private pensions and health on the income security of the elderly. Prerequisite: Geron. 100Q.

404. Psychology of Aging. (3). Cross-listed as Psy. 404. An examination of the issues surrounding the adult aging process. Includes personality and intellectual change, mental health of the elderly and the psychological issues of extending human life. Special emphasis on strengths of the elderly and prevention of psychological problems of the elderly. Prerequisite: Psy. 111Q.

451. Cooperative Education. (1-3). Provides practical field experience, under academic supervision, that complements and enhances the student's academic program. Repeatable up to six hours. Offered Cr/NC only. Prerequisite: Geron. 100Q and instructor's consent.

Courses for Graduate/Undergraduate Credit

501. Field Experience. (3-6). A supervised field experience in an agency or organization planning or providing services to older people, individually designed to enhance each student's skills and knowledge of the aging service network. Repeatable for six hours. Credit. Prerequisite: 12 hours of gerontology credit and instructor's consent.

512. Issues in Minority Aging. (3). Cross-listed as Min. S. 512. Addresses the needs and interests of students who are interested in providing services to the minority elderly, exploring the issues of concern to minority elderly, becoming familiar with the rights of older/minority Americans, learning the legal procedures for resolving specific problems of minority elderly, and offering tried and tested solutions to problems of minority elderly. Prerequisites: Min. S. 510Q, Geron. 100Q, Soc. 111Q or instructor's consent.

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. 111Q.


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.

518Q. Biology of Aging. (3). Cross-listed as Biol. 518Q. An introduction to the phenomenon of aging, including a survey of age-related processes and mechanisms of senescence, emphasizing humans. Students earning graduate credit produce a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisite: a basic course in biology that satisfies the general education requirements.

520. Family and Aging. (3). Cross-listed as Soc. 520. An analysis of the families and family systems of older people. Special emphasis is placed upon demographic and historical changes, gender, caregiving and intergenerational relationships as these relate to the family life of older people. Prerequisite: Geron. 100 or junior standing.

537. The Social Consequences of Disability. (3). Cross-listed as Soc. 537. 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. 111Q.

550. Selected Topics in Gerontology. (1-6). Study in a specialized area of gerontology with the focus upon preprofessional programs and current issues in the field of aging. Emphasizing knowledge and skills in applied areas of gerontology as they relate to an emerging area of research and application. Repeatable up to six hours. Prerequisite: instructor's consent.

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.

663. Economic Insecurity. (3). Cross-listed as Econ. 663. Personal economic insecurity, such as unemployment, old age, health care, disabilities, and erratic economic fluctuations. Includes costs and benefits of government action to aid in meeting such insecurities. Prerequisite: Econ. 202Q or instructor's consent, and junior standing.

700. Grant Proposal Preparation. (3). Concerned with the process of research and project proposal development, including response to published guidelines, project planning and proposal development and submission. Examples of proposal development, including procedures for identifying funding sources and their purposes and methods and processes of proposal evaluation. Students write and evaluate proposals.

715. Adult Development and Aging. (3). Explores theory and research related to the academic program. Repeatable up to six hours. Prerequisite: 12 hours of gerontology credit and departmental consent.

720. Independent Readings in Gerontology. (1-3). Directed study in a specialized topic in gerontology. Repeatable up to six hours. Prerequisite: 12 hours of gerontology credit and departmental consent.

750. Workshop in Gerontology. (1-3). Provides specialized instruction, using a variable format in a gerontologically relevant subject. Repeatable for credit.

781. Cooperative Education. (3-6). Provides practical field experience, under academic supervision, that is suitable for graduate credit and complements and enhances the student's academic program. Repeatable up to six hours. Prerequisite: 12 hours of gerontology credit and instructor's consent.
The objective of the program is to increase the student's cross-cultural communication skills by providing exposure to and an understanding of communication uniqueness among members of America's ethnic/cultural groups, thereby minimizing the barriers that often hamper effective cross-cultural communication.

The program offers courses and programs to stimulate favorable interaction among people, thus reducing ethnic tension. Emphasis in the program is on cross-cultural communication, which stresses the uniqueness of the individual's cultural experiences and resulting behavior which affects communications across ethnic and cultural lines.

Major. The major in minority studies consists of at least 30 hours, including Min. S. 100Q; 210Q; three or more of the following: 220, 240Q, 260, 331, 332, 333, 410, 512; and two of the following: 540, 545, and either 548 or SUPA 307 or 597.

Certain courses in related areas that meet the particular needs of the student and are approved by an advisor may be counted toward a major. These courses may not count for more than six hours.

Minor. A minor in minority studies consists of at least 18 hours. The courses are to be approved by the student's advisor in the program.

Lower-Division Courses
100Q. Introduction to Minority Studies. (3). General education introductory course. Orientation to the nature and scope of minority studies. Emphasizes the unique nature of the experience of minority groups in this country. Also undertakes a cursory examination of some alternative styles of behavior in dealing with problems peculiar to minority people in the United States.

210Q. Fundamentals of Cross-Cultural Communications. (3). General education introductory course. An examination of the effects of different cultures on language and methods of communicating. Also studies communications and its relationship to behavior in this country.

220. Martin Luther King, Jr. Study of the life and philosophy of the Rev. Dr. Martin Luther King, Jr. Special emphasis on the motivation, objectives, and social impact of Dr. King's life on the civil rights movement and interracial relations in the United States.

240Q. Minority Women in America. (3). General education further studies course. Cross-listed as Wom. S. 240. An examination of the lives, talents and contributions made by minority women to the American culture. An analysis of the misconceptions about minority women that have been generated and perpetuated through the ages by providing accurate information about their lives and attitudes. To help people relate better to minority women in America and understand their attitudes, sensitivities and emotions.

251Q. Women and Minorities in the Criminal Justice System. (3). Cross-listed as CJ 355. Examines the role of women and minorities within the criminal justice system from two perspectives: (1) individuals employed by the criminal justice system and (2) individuals who commit crime and/or are apprehended by the criminal justice system. Emphasizes those aspects unique to women and minorities and their interactions with law enforcement, judiciary and corrections.

260. Prominent Minorities in the Making of America. (3). Designed to explore, compare and contrast minority thought and processes for social, economical and political reform. Delves into the social concepts of prominent American minorities through the coverage of popular novels, biographies, autobiographies, rhetoric, etc. Prerequisite: Min. S. 100Q.

Upper-Division Courses
331. The Black Family. (3). Examines the fictional and factual images of black American families from slavery to the present. Primary focus on the adaptive abilities of poor, working class and middle class black families. Prerequisites: Min. S. 100Q, 210Q or instructor's consent.

332. The Native American. (3). Examines contemporary issues facing the Native American with special focus on the Osage tribe. Prerequisites: Min. S. 100Q, 210Q or instructor's consent.

333. Issues in the Chicano Community. (3). Examines a variety of social, psychological and political concerns affecting Mexican Americans. Special attention to the impact of immigration and to the media's role in the portrayal of the Chicanos. Prerequisites: Min. S. 100Q, 210Q or instructor's consent.

350. Workshop. (1-4). Focused on the nature and scope of minority studies. Emphasizes the unique nature of the experiences of a specific American minority group.

410. The African American Male. (3). Examines the impact of racism on the role and lifestyle of the African American male in American society. Prerequisite: Min. S. 100Q, 210Q or instructor's consent.

481. Cooperative Education. (1-4). Allows the student to examine the impact of minority status in the work environment. Examines interpersonal interactions, communication and adaptation to the business world and the multicultural work environment. Offered Cr/NC only. Prerequisite: program consent.

491. Urban Seminar. (3). Exposes students to contemporary literature on urban problems in the context of the Wichita community. Instructors and neighborhood leaders familiarize students with the history, demographics, and culture of the neighborhood. Students required to volunteer 16 hours per month for three months with a neighborhood-based agency. WSU will make a 3-hour tuition (in-state rate) gift to the student upon acceptance to the course. Prerequisites: 2.0 GPA; must be currently enrolled in at least 3 hours in addition to Min. S. 491; Min. S. 100Q or 210Q or instructor's permission.

Courses for Graduate/Undergraduate Credit
512. Issues in Minority Aging. (3). Cross-listed as Geron. 512. Addresses the needs and interests of students who are interested in (1) providing services to the minority elderly; (2) exploring the "issues" of concern to minority elderly; (3) becoming familiar with the rights of older minority Americans; (4) learning the legal procedures for resolving many of the specific problems of the minority elderly, and (5) offering trained and tested solutions to the problems encountered by minority elderly. Prerequisites: Min. S. 100Q, Geron. 100, Soc. 111Q or instructor's consent.
540. Advanced Cross-Cultural Communications. (3) An advanced study on special topics in human relations. Prerequisite: Min. S. 380 or concurrent enrollment.

545. Cross-Cultural Communications Theory (3). An examination of current cross-cultural communication theory and its impact on contemporary cross-cultural issues.

580. Individual Projects. (3) Student conducts independent research related to a specific minority group. Prerequisite: 90 hours of Wichita State credit or program consent. Repeatable for a total of 6 hours.

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.

750. Workshop. (1-4) Focuses on the nature and scope of minority studies. Emphasizes the unique nature of the experiences of minority groups in this country.

Public Administration
The Master of Public Administration program consists of 39 graduate hours.

The Master of Public Administration program uses an important blending of academic foundations and real world application. Because of the program's relationship to the Hugo Wall School's research and service components, faculty and students are able to test immediately theoretical positions through state and local government research and application. This effort to blend theory and application is further enhanced through adjunct faculty from state and local government.

The final opportunity for joining theory and application comes in the form of program completion options. Students have opportunities for internships with national, state, and local government. Students with well-established career paths can tailor a portion of their course work to match their professional needs.

The degree is made up of two elements—the core curriculum and an area of specialization. Students may develop a specialization in one of three areas: management, financial management, or public policy analysis. The program can be structured to match the career aspirations of the student using course offerings from selected University departments.

Courses for Graduate/Undergraduate Credit

560. The Planning Process. (3) Cross-listed as Pol. S. 560. 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.

564. Comparative Public Administration. (3) Cross-listed as Pol. S. 564. Studies the administrative system of selected developed and developing countries emphasizing the various methods and approaches of comparative analysis and the relationships between administrative institutions and their environmental settings.


625. Computer Applications for Public Policy. (3) Familiarizes students with major types of software applications for IBM compatible microcomputers and their use in public policy analysis. Prerequisite: sponsorship by local government.

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. 201Q and 202Q, or Econ. 800, and junior standing.

700. Urban Affairs. (3) A study of the policy issues faced by local government in an urban setting from a multidisciplinary point of view.

702. Research Methods in Public Administration. (3) Acquaints students with applied public policy research methods. Emphasizes collecting, analyzing, 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. Prerequisite: instructor's consent.

710. Public Sector Organizational Theory and Behavior. (3) Cross-listed as Pol. S. 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.

725. Public Management of Human Resources. (3) Cross-listed as Pol. S. 725. Surveys the major areas of management of human resources in the public sector. Includes hiring, training, evaluation, and pay promotion policies. Special emphasis on 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.

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.

750. Public Administration Workshops. (1-3) Specialized instruction using variable format in a public administration or urban affairs relevant subject. Repeatable for credit.

755. Special Topics in Urban and Public Affairs. (3) Provides students with an opportunity to engage in advanced study in topics that are not part of a regular course of study 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.

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. 201Q and 202Q or instructor's consent.

775. State and Local Government Law. (3) Exposes students to the legal principles which undergird the foundation of governmental operation and administration.

780. 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

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: P. Adm. 702 or instructor's consent.

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.

842. Administration in Local Government. (3) Cross-listed as Pol. S. 842. Examination of administrative processes and problems in local government, including the role of the professional chief executive. Examines problems from the following: labor-management relations, program evaluation, county government reform, governmental decentralization, citizen participation, grant-in-aid programs, interlocal cooperation, affirmative action requirements and service contracting. Prerequisite: Pol. S. 317.

Examines the roles of participants in public policy development, implementation, and evaluation. Explores policy and program functions and their intended and unintended impacts. Also focuses on methodologies for collection of data and their use in the assessment of programs and program impacts. Prerequisites: P. Adm. 702 and 745.

865. State and Local Government Finance. (3). Cross-listed as Pol. S. 865 and Econ. 865. An analysis of state and local government expenditure and revenue systems, with an introduction to state and local financial administration. Prerequisites: P. Adm. 765 or instructor's consent.

866. State and Local Government Budgeting. (3). Cross-listed as Pol. S. 867. 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: P. Adm. 865 or instructor's consent.


890. Internship. (3). Integrates academic pursuit 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 P. Adm. core courses and 6 hours of additional graduate credit courses.

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, politics, organizational results, and ethics. Prerequisites: successful completion of all other core courses in the MPA or instructor's consent.

Social Work

The social work curriculum provides a foundation for graduate education in social work, including eligibility for advanced standing. Introductory social work courses also are useful for students planning to enter other helping professions as well as for informed participants in community problem solving. WSU's program is accredited by the Council on Social Work Education which is required for professional licensure in Kansas and other states.

Progression in the social work program has two key stages: initial admission into the major program and professional standing for entry into the practicum.

Requirements include a 2.500 overall GPA, 3.000 in entry level social work course work, and satisfactory completion of a noncredit orientation session. Provisional admissions may be granted before final grades are received but enrollment in required upper-division social work courses is dependent upon meeting these admission standards. The second stage is application for admission into supervised field practicum. Complete application materials for admissions into the major program and the field practicum are available from the social work office.

Lower-Division Courses

150. Aspects of Social Work. (Workshop). 2-5. Aspects of social work practice relating primarily to paraprofessional work with practitioners regarding basic human needs and the fundamentals of helping. May be offered with Sw. Wk. 750.

200Q. Understanding Social Welfare. (3). Surveys a broad spectrum of social welfare programs and policies, emphasizing the relations of governmental and voluntary sector service systems to larger social institutions and to historical developments in determining who should be helped and how. Explores the relations of area services to unmet individual, group, and societal needs, to trends in policy, and to current issues.

201. Introduction to Social Work Practice. (3). Introduction to the practice of social work. Includes development of social work as a profession: the holistic approach and multilevel preventive strategies used in practice, aspects of the problem-solving process, and attention to the current trends in direct social services. Community service activities are required. Prerequisites: Soc. 111Q and Psy. 111Q.


481. Cooperative Education in Social Work. (1-14). A practical experience with public and private sector agencies which address a broad range of individual needs and community problems. Topical journals focus upon individual knowledge and skill development through field experience while engaged in the major social work curriculum. Repeatable as elective credit not to exceed 12 hours. Graded C/NCR.

Courses for Undergraduate/Graduate Credit

500. Social Welfare Policy: Analysis and Evaluation. (3). Develops systematic frameworks for examining factors shaping social policy and programs, evaluating major social welfare programs and alternative designs, and engagement of complex community resources in an urban environment. Prerequisites: Pol. S. 121Q or Hist. 132Q, Soc. Wk. 200Q.

502. Social Work Practice: Strategies and Techniques. (4). Introduces the study and practice of interpersonal professional interaction skills within the framework of a social work helping process. Focuses on developing skills in professional observation, communication, interviewing, recording, and reporting. Course is didactic as well as interactive and includes an integrated laboratory component which focuses on experiential learning. Required for social work majors. Prerequisite: program admission.

541. Women, Children, and Poverty. (3). Cross-listed as Wom. S. 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 to poverty among women in Kansas. Prerequisites: 6 hours of social science preferably in women's studies, including Wom. S. 388Q, or instructor's consent.

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 six hours. Prerequisite: instructor's consent.

560. Personal Human Interaction within Society. (3). Provides a beginning theoretical framework within which the integration of prior knowledge can be made regarding physical, mental and social development of the human being, perspectives on American culture and subcultural variations and their effect on human adaptability in the social environment, and the relationship of those entities to beginning professional social work practice. Prerequisites: Six hours from a list of social and behavioral science courses approved by the social work faculty and selected in consultation with a social work advisor.

570. Internships in Social Work. (3-6). Provides a specially designed field experience for special students who need or desire training that will enhance their professional abilities and for whom academic credit is appropriate. Also meets experiential needs of special designated students for whom academic credit is appropriate. Repeatable for credit not to exceed a total of six hours. Prerequisite: instructor's consent.

600. Social Welfare Development. (3). Develops social work knowledge and skills to foster innovation and change within human service organizations, in program networks, community dynamics, and in arenas of public policy. Social work models are developed to lessen the magnitude of social problems and advance social justice in urban environments with diverse populations and dynamic resource systems. Prerequisites: Sw. Wk. 200, Pol. S. 121Q or Hist. 132Q.

601. Advanced Social Work Practice. (3). Advanced practice theory emphasizing becoming both knowledgeable and skillful in apply-
ing theory to practice. Focuses on developing a clear understanding of concepts, principles, techniques and processes of social work methods as they relate to individuals, families and groups and to the larger community. To be taken concurrently with Sc. Wk. 602 except by program consent. Prerequisites: Sc. Wk. 502 and program consent.

602. Practicum I (4). Placement in community social welfare agencies for supervised periods of observation and direct service assignments emphasizing performance of basic practice skills and understanding of the social welfare agency and its role in the community service network. To be taken concurrently with Sc. Wk. 601 except by program consent. Prerequisites: a grade of B or better in Sc. Wk. 502 and program consent.


605. Practicum II (5). Placement in community social welfare agencies for supervised direct service assignments emphasizing formulation of appropriate goals. Includes the selection of various social work roles and in-depth development of techniques and skills common to practice in the social welfare field. Prerequisite: Sc. Wk. 602.

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. This course 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.

750. Social Work Workshops. (1-5). Specialized instruction using a variable format in the social welfare relevant subject. Course may be offered together with Sc. Wk. 150. Prerequisite: instructor's consent.

Women's Studies

The Center for Women's Studies is a resource and research center for scholarship concerning women. The center offers courses and administers a major and a minor in women's studies, a discipline which presents an analysis of gender in society through the use of a variety of approaches, including feminist theory. Students investigate such areas as changing gender role expectations, American and global social and cultural concerns, and the professional and domestic contributions of women to the culture, especially concerning the role of women in the arts and sciences. Women's studies may also be pursued as a part of a dual major by students whose intellectual or vocational interests are best served by a focus on women's studies in conjunction with another academic field.

Major. Within the major in women's studies, students may focus on either humanities or social science women's studies courses, supplementing each track with interdisciplinary courses that apply to either focus. The major requires a minimum of 30 hours of course work with no more than three hours in courses numbered 140 to 149. Other 100-level courses and workshops may not be counted for the major, except for 190G, which may be counted.

In addition to women's studies courses, appropriate cross-listed courses for the major may be selected from such fields as philosophy, sociology, social work, history, English, anthropology, religion, minority studies, psychology, communication, political science, and administration of justice. Students considering the major in women's studies should be advised by a women's studies faculty member regarding their academic programs, their vocational goals, and the selection of a humanities or social science track in the women's studies major.

To pursue the Humanities focus, the following combinations of courses are possible:

12 hours of required courses, Wom. S. 287Q, 387Q, 587, and one of the following: Wom. S. 391, 482, or 586

15 hours of Humanities women's studies courses (group 2 below) or combination of Humanities and Interdisciplinary courses (group 1 below)

3 hours of Social Science women's studies courses (group 3 below)

To pursue the Social Science focus, the following combinations of courses are possible:

12 hours of required courses, Wom. S. 287Q, 387Q, 587 and one of the following: Wom. S. 391, 482, or 586

15 hours of Social Science women's studies courses (group 3 below) or a combination of Social Science and Interdisciplinary courses (group 1 below)

3 hours of Humanities women's studies courses (group 2 below)

Group 1: Interdisciplinary women's studies courses: Wom. S. 190G, 287Q, 380K, 387Q, 391, 481, 482, 570, 580, 587, 635


Minor. The minor in women's studies consists of a minimum of 15 hours of women's studies courses, including Wom. S. 287Q and 387Q. Restrictions on 100-level courses in the major (see above) also apply to the minor.

Certificate in Women's Studies. The Certificate in Women's Studies requires 15 hours of courses in women's studies, including cross-listed courses, and including Wom. S. 287Q and 387Q.

Lower-Division Courses

140. Journal Writing. (1). Workshop: acquaints students with the concept and practice of journal writing. Readings deal with specific themes (work, family, relationships, etc.) and students are required to keep a daily journal. Course provides an intense journal writing experience for those enrolled and encourages students to continue the practice on their own. Graded S/U.

141. Women's Sexuality. (1). Presents information on women's sexuality from physiological, psychological and socio-cultural perspectives. This integrated view focuses on women's body images and perceptions of self as sexual beings, as well as on socialization and gender role expectations, choices of sexual behavior, sexual dysfunction and communications in sexual relationships.

142. Domestic Violence. (1). Deals with the roots of domestic violence embedded in family roles, legal systems, religious beliefs and the psychology of women, children and men. Also covers the consequences and prevention of family abuse. Includes discussion of literature and films.

150. Workshops (1-2). Topics vary by semester. Past topics have included assertion training (introductory and advanced) and rape information and prevention.

150C. Assertion Training for Women. (1). Workshop: teaches women to develop assertion skills. Considers some of the changing roles and values of women in society today and how these create a need for women to be assertive in their professional and personal choices. Focuses on barriers that exist to assertive behavior and ways to overcome them.

150J. Rape Information and Prevention. (1). Workshop: explores the cultural myths and stereotypes about rape, the legal system, methods of self-protection, community resources providing help for victims and other related issues. Primary focus on prevention of rape itself.

150M. Advanced Assertion Training. (1). For students who have taken Wom. S. 150C. Applies assertion principles and behaviors to specific topics such as employment, male-
female relations, sexuality, parent-child relations and organized group activity. Prerequisite: Wom. S. 150C.

180. Special Topics. (1-2). Topics vary by semester.

>190G. The American Woman in Popular Culture. (3). General education introductory course. Examines how women of various races, classes, and ethnicities are represented in a wide variety of popular media. Encourages the critical analysis of why and how these popular representations are politically and socially significant in shaping society’s perceptions of "the american woman." Also explores women’s popular genres.

240. Minority Women in America. (3). Cross-listed as Min. S. 240Q.

>287Q. Women in Society: Social Issues. (3). General education introductory course. Examines women’s efforts to claim their identity from historical, legal and social perspectives. Includes recent laws relating to women; contemporary issues (such as rape, day care, working women, the future of marriage) agencies for change; theories of social change; and the relationship of women’s rights to human rights.

Upper-Division Courses

316. The American Male. (3). Cross-listed as Soc. 316.

325. Women in the Political System. (3). Cross-listed as Pol. S. 325. Examines the political process of policy making, using policies of current interest concerning women. Explores the association of societal gender role expectations with existing and proposed public policies that pertain to women’s lives. Prerequisite: 6 hours of social science or instructor’s consent.

330. Women’s Personal Narratives. (3). Cross-listed as Eng. 336. Explores the literary genre of the journal as practiced by both historical and modern women. Examines works by both well-known diarists and little-known notebook keepers. In-class writing and out-of-class assignments; students are encouraged to do daily work in a journal of their own. Prerequisites: Eng. 101 and 102.

331. Women’s Biographies and Autobiographies. (3). Examines women’s lives as constructed in the literary genre of biographical and autobiographical narratives. Women’s lives have been lived in the private rather than the public sphere, the importance of their lives has often been attributed to their domestic accomplishments, personal influence and moral character. Reading biographies of ordinary and extraordinary women in a historical framework reveals ways in which the expression of power has been transformed by social change. Prerequisites: Eng. 101, 102 and one course in literature.

332. Goddesses in Myth. (3). Traces the development of the characteristics, powers and ideas about classical Greek and Roman as well as ancient Northern European goddesses from a pre-historic, world-wide worship of female deities. Examines the female dominated cultures and religions of the paleolithic and neolithic and then follows the transition from this ancient worship to the classical and Northern European conception of goddesses.

333. Women and Religion. (3). Cross-listed as Rel. 333Q.

338. Philosophy of Feminism. (3). Cross-listed as Phil. 338.


342. Women in Management. (3). Considers women in all phases of business with an in-depth examination of women in management. Includes sexual discrimination, sexual harassment, career development, dual career relationships and women in international management. The primary aim is to promote awareness of the part of both men and women of the role that women now play in business and the professions and their future potential in those institutions.

345. Women and Dependencies. (3). Provides information about women’s dependencies and their relationship to constructions of gender. Examines dependencies on substances and processes (alcohol, street and prescription drugs, eating disorders and dysfunctional relationships) in their social and personal context. Examines theories of treatment and recovery in relation to feminist theory and women’s roles in co-dependency.

361. Women and Work. (3). General education further studies course. Examines the image and reality of women’s employment from minimum wage work to corporate board rooms, as well as women’s unpaid work. It explores the impact of cultural values, societal arrangements, and public policy on occupations, wages, and family life.

380. Special Topics. (1-3). Focuses on intermediate topics of interest to women’s studies.

380K. Women and Peace. (3). Explores many facets of women’s strategies for interpersonal and political peacemaking. Also explores women’s pacifist and patriotic strategies, including service, resistance and direct actions.

387Q. Women in Society: Cultural Images. (3). General education further studies course. Examines the roots of ideas about women in our society and women’s responses to those ideas as they have attempted to define themselves. Emphasizes cultural images of women in literature, art, myth, philosophy, religion, psychology, education and politics. Also considers women in other cultures and other times and contemporary women’s visions of an alternative future.

391. Women’s Global Issues. (3). General education further studies course. Explores women’s issues from a global perspective in relation to policies approved by the International Women’s Decade conferences of the United Nations. Emphasizes understanding the impact of nationalism, race, class and cultural values in creating obstacles to women’s full participation in society. Explores strategies for achieving full human rights for women. Prerequisites: one course in women’s studies and one course in history or political science.

480. Special Topics. (1-3). Provides an introduction to the exploration of various women’s studies’ themes.

481. 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. Offered Cr/NCr only.

482. Latina Feminism. (3). Examines what it means to be a Latina and a feminist in U.S. culture, confronting racism and sexism as well as being empowered through Latina identity. The exploration of Latina identity results in creative transformation and a new understanding of the relationship of self to community. Materials drawn from Chicana feminist studies in prose, poetry, criticism, film, and from guest speakers.

Courses for Graduate/Undergraduate Credit

>511. Women in Early America, 1600-1830. (3). General education further studies course. Traces women’s contributions and experiences in building the U.S., from 1600 to the 1830s. Includes both conventional and newly developed methodologies in women’s history research.

>512. Women and Reform in America, 1830-Present. (3). General education further studies course. Examines the history of women in the U.S. from 1830 to the present. Focuses especially on women’s involvement in various social reform activities, efforts which eventually led to work toward equal rights and improved conditions for women.


521. Women’s Traditional Arts. (3). Surveys various arts forms which are usually identified as the creative works of women. Using such examples as quilts or other textile arts, students focus not only on the aesthetics of these traditional forms, but also on their historic and social value to the culture.

522. Contemporary Women’s Art. (3). Examines art by women in the contemporary world. Special attention to the impact of the women’s movement on the creative energies and on the career directions and opportunities of these women in the arts.

523. Feminist Film Criticism. (3). Applies critical methods of analysis from the field of feminist film studies (such as psychoanalysis, ideology critique, close textual analysis, narrative and genre criticism) to the representation of women in film. Emphasizes historical development of feminist film theory and criticism as it relates to classical Hollywood narrative, film genres, and avant-garde film. Prerequisites: 180 hours of upper-level humanities or 3 hours of upper-level women’s studies.
530. The American Woman in History. (3). Cross-listed as Hist. 530.

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.


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. Prerequisite: Engl. 101, 102, and one course in literature.

536Q. 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 literary periods covered, critical theories explored and specific authors studied vary in different semesters.

537. Contemporary Women's Drama. (3). Cross-listed as Engl. 537. Examines contemporary plays by and about women to discover and explore the insights of the various playwrights into the lives and roles of women. Writers considered vary. In addition to reading and analyzing plays, students write plays of their own. Prerequisites: Engl. 101 and 102 and 3 hours of English literature.

>541. Women, Children, and Poverty. (3). General education issues and perspectives course. Cross-listed as Soc. Wk 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 to poverty among Kansas families. Prerequisites: 6 hours of social science preferably in women's studies, including Wom. S. 287Q.

542. Women in Other Cultures. (3). Cross-listed as Anthr. 542.

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.

560. Special Topics. (1-3). Focuses on advanced topics of interest to women's studies. Repeatable for credit.

570. Directed Readings. (1-3). For students who wish to pursue special reading or research projects not covered in course work. Prerequisite: instructor's consent.

580. 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 knowers, knowing, and the known?

587. Theories of Feminism. (3). Because feminism is not a single ideological stance or perspective, course examines a variety of ideas underlying feminist cultural critiques and visions for social change. Discusses the contributions of women's studies to various academic disciplines. Prerequisites: Wom. S. 387Q and 388G, or 6 hours of women's studies courses, or instructor's consent.

635. Leadership Techniques for Women. (3). Cross-listed as Comm. 635. Provides the woman student experience in decision making and improves skills in leadership through role playing and exercise in group dynamics.

Courses for Graduate Students Only

879. Directed Readings. (2-3). For graduate students to pursue research in areas not normally covered in course work. Repeatable for credit with departmental consent. Prerequisite: instructor's consent.

880. Seminar in Women's Studies. (3). Intensive study of selected women's studies topics. Seminar discussion, reports and research project. Previous topics include Advanced Theories of Feminism and Contemporary Women's Fiction. Repeatable for credit with departmental consent. Prerequisite: instructor's consent.

The following abbreviations are used in the course descriptions: R stands for lecture and L for laboratory. For example, 4R, 2L means four hours of lecture and two hours of lab.
University Faculty—Fall 1997

Note: This listing reflects the faculty at Wichita State University as of October 1, 1997.


Ackerman, Paul D., Assistant Professor and Assistant Chairperson, Psychology (1968). BA, University of Kansas, 1954; MA, 1966; PhD, 1969.


Alagic, Suad, Professor, Computer Science (1993). BS, University of Sarajevo, 1975; MS, University of Massachusetts, 1972; PhD, 1974.

Alexander, David R., Professor and Chairperson, Physics, and Executive Director, Lake Afton Public Observatory (1971). BS, Kansas State University, 1967; AM, Indiana University 1968; PhD, 1971.

Ali, Shahid, Visiting Assistant Professor, Finance, Real Estate, and Decision Sciences (1997). BS, University of Engineering and Technology, Pakistan, 1982; MBA, Emporia State University, 1987; PhD, Texas Tech University, 1998.

Alley, Robert D., Professor, Curriculum and Instruction (1967). BS, Iowa State University, 1957; ME, University of Montana, 1960; EdD, Arizona State University, 1967.


Anderson, Peggy J., Assistant Professor, Curriculum and Instruction (1993). BS, Emporia State University, 1967; MA, University of Kansas, 1979; PhD, Wichita State University, 1993.


Armstrong, Richard N., Assistant Professor, Elliott School of Communication (1987). BA, Southern Utah State College, 1972; MA, Brigham Young University, 1974; PhD, Bowling Green State University, 1978.


Babitch, Judith, Associate Professor, School of Performing Arts (1984). BA, Edgehill College, 1974; MA, University of Cincinnati, 1976; PhD, University of California, 1981.

Bagdott, Barry T., Assistant Professor, School of Art and Design (1993). BFA, Virginia Commonwealth University-Richmond, 1985; MFA, Syracuse University, 1990.

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Popp, Harold A., Professor, School of Music (1993). BME, Ottawa University, 1959; MME, Indiana University, 1960; MFA, University of Iowa, 1969; PhD, University of Colorado, 1979 (Honorary Degree).

Porter, Stephen S., Assistant Professor, Marketing (1995). BS, Friends University, 1976; MBA, Wichita State University, 1982; PhD, Oklahoma State University, 1994.

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Richardson, William H., Associate Professor and Associate Chairperson, Mathematics and Statistics (1962). BA, California State University, Chico, 1959; MS, Iowa State University, 1961.


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St. John, Richard W., Professor, School of Art and Design (1969). BFA, Kansas City Art Institute, 1966; MFA, Alfred University, 1969.
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Schneider, Philip H., Professor, English (1967). BS, State University of New York College-Oneonta, 1965; MFA, University of Iowa, 1967.
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Scudder, Rosalind R., Professor, Communicative Disorders and Sciences (1972). BA, Wichita State University, 1964; MA, 1972; PhD, 1978.
Sethi, Awaniti P., Associate Professor, Finance, Real Estate, and Decision Sciences (1988). BS, Gauhati University, 1974; MS, Kansas University, 1978; MBA, Carnegie-Mellon University, 1982; Phd, 1983.
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Short, Lois, Instructor and Clinical Coordinator, School of Nursing (1986). BSN, University of Kansas, 1958; MS, Kansas State University, 1977; PhD, 1980.
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Smith, Bert L., Professor, Aerospace Engineering (1966). BSME, University of Missouri at Rolla, 1953; MSME, 1960; PhD, Kansas State University, 1968.
Smith, Larry D., Assistant Instructor and Associate Director, Research Administration (1978). BBA, Wichita State University, 1970.
Smith, Libby, Instructor, Sociology (1997). BS, Northern Arizona University, 1979; MA, San Jose State University, 1989; EdD, Northern Arizona University, 1997; PhD, 1998.
Smith, Nicholas E., Professor, School of Music, and Associate Dean, College of Fine Arts (1975). BM, Pittsburg State University, 1970; MM, Eastern School of Music, 1972; DMA, 1981.
Smith, Patrick S., Associate Professor, School of Art and Design (1991). BA, University of Notre Dame, 1972; MA, University of North Carolina, 1975; PhD, Northwestern University, 1982.
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Spillman, Richard S., Associate Professor and Director of Creative Writing, English (1992). BA, Illinois Wesleyan University, 1968; MA, San Francisco State University, 1972; PhD, State University of New York-Binghamton, 1982.
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Steinke, Elaine, Associate Professor, School of Nursing (1990). BSN, Wichita State University, 1979; MN, 1982; PhD, Kansas State University, 1987.
Stephan, Rebecca W., Instructor and Assistant Director, School of Accountancy (1986). BS, Central State University, 1977; MBA, 1979; CPA-Kansas.
Stephens, Frances C., Associate Professor, English (1970). BA, Texas A&M University, 1956; MA, University of Texas, 1967; PhD, 1970.
Stone, Brian J., Associate Professor, Administration, Counseling, Educational, and School Psychology (1996). BA, Columbia College, 1983; MEd, Brigham Young University, 1985; PhD, Ball State University, 1989.
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Sullivan, Betty A., Assistant Professor, School of Art and Design (1971. 1976, 1986). BSN, University of Kansas, 1958; MEd, Wichita State Uni-
Sutterlin, Peter G., Professor, Geology, and Coordinator, General Education (1983). BS (Hon.), McMaster University, 1953; PhD, Northwestern University, 1958.


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Williams, Brian W., Assistant Professor and Business Librarian, Library (1983). BA, Ball State University, 1975; MBA, 1981; MLS, Indiana University, 1982.

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Wright, David W., Assistant Professor, Sociology (1983). BA, Indiana University-Purdue University at Indianapolis, 1987; MA, Purdue University, 1989; PhD, 1992.


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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 one hour of credit. In courses involving meetings other than lectures, the following symbols are used: R, lecture; L, laboratory; T, theory; C, conference; D, demonstration; and P, practicum, with the hours of practicum per week given in front of the letter (6-8P means six to eight hours of practicum per week).

Abbreviations
The following abbreviations of academic departments and areas are used in reference to courses offered by those departments.

<table>
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Facilities are identified with a letter corresponding to their location on the map.

Buildings
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- Ahlberg Hall (C)
- Blake Hall (B)
- Brennan Hall I (C)
- Brennan Hall II (C)
- Brennan Hall III (C)
- CAC Theater (C)
- Central Energy Plant (D)
- Cessna Stadium (C)
- Child Development Center (A)
- Clinton Hall (C)
- Communications Building (B)
- Corbin Education Center (D)
- Credit Union (D)
- Devlin Hall (C)
- Duersen Fine Arts Center (B)
- Eck Stadium (E)
- Edwin A. Ulrich Museum of Art (B)
- Elliot Hall (C)
- Engineering Building (D)
- Fairmount Towers Commons (A)
- Fairmount Towers North (A)
- Fairmount Towers South (A)
- Fiske Hall (B)
- Gaddis Physical Plant Complex (D, E)
- Gardner Plaza (C)
- Golf Course Maintenance Building (E)
- Golf Pro Shop (F)
- Grace Memorial Chapel (C)
- Grace Wilkie Hall (D)
- Hensler Hall (C)
- Heskett Center (D)
- Heskett Center Storage (D)
- Housing Maintenance Shop (A)
- Hubbard Hall (C)
- Human Resources Center (C)
- Intensive English Language Center (A)
- Jabara Hall (C)
- Jardine Hall (C)
- Levitt Arena (B)
- Lindquist Hall (C)
- Lutheran Student Center (D)
- Marcus Center for Continuing Education (F)
- Math-Physics Building (C)
- McKinley Hall (B)
- McKnight Art Center (B)
- Media Resources Center (D)
- Memorial '70 (B)
- Morrison Hall (C)
- National Institute for Aviation Research (E)
- Neff Hall (C)
- Newman Center (D)
- Original Pizza Hut (D)
- Police Department (D)
- President's Residence (B)
- Publications (D)
- Rhatigan Student Center (C)
- Sheldon Coleman Tennis Complex (C)
- Tyler Field (E)
- University Alumni and Faculty Club (F)
- Visual Communications (D)
- Wallace Hall (D)
- Wheatshocker Apartments (E)
- Wiedemann Hall (B)
- Wilkins Stadium (D)
- Wilner Auditorium (B)
- Woodman Alumni Center (F)

Fraternities
- Alpha Tau Omega (B)
- Beta Theta Pi (A)
- Delta Upsilon (C)
- Kappa Sigma (D)
- Phi Delta Theta (E)
- Sigma Alpha Epsilon (B)
- Sigma Nu (B)
- Sigma Phi Epsilon (C)

Sororities
- Alpha Phi (D)
- Delta Delta Delta (D)
- Delta Gamma (D)
- Gamma Phi Beta (D)

Wichita State has an ongoing program to provide people with disabilities full access to all buildings; however, some barriers still exist. For more information regarding any campus building’s accessibility to the disabled, call the Office of Disability Services, (316) 978-3309.

Visitors to the Wichita State campus should obtain temporary parking permits from the Police Department, open 24 hours a day.

For more information contact the Wichita State University Office of Admissions, 111 Jardine Hall, (316) 978-3085.
Academic Programs at Wichita State University
Are Accredited by or Hold Membership
in the Following Associations

North Central Association of Colleges and Schools*
Accreditation Board of Engineering and Technology
American Assembly of Collegiate Schools of Business
American Bar Association
American Dental Association
American Speech-Language and Hearing Association,
North Central Association of Colleges and Schools
Commission on Accreditation of Allied Health
Education Programs
Commission on Accreditation of the
American Physical Therapy Association
Council on Social Work Education
Kansas Board of Emergency Medical Services
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 Council for Accreditation of Teacher Education
National League of Nursing

*North Central Association of Colleges and Schools Commission on Institutions of Higher Education;
30 North LaSalle Street, Suite 2400; Chicago, Illinois 60602-2504; (800) 621-7440.

A complete listing of the programs and degrees offered at Wichita State
University is located on the inside back cover of this Catalog.
# Wichita State University

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A = Associate  
B = Bachelor  
M = Master  
S = Specialist  
D = Doctorate  

*Master of Fine Arts, a terminal degree